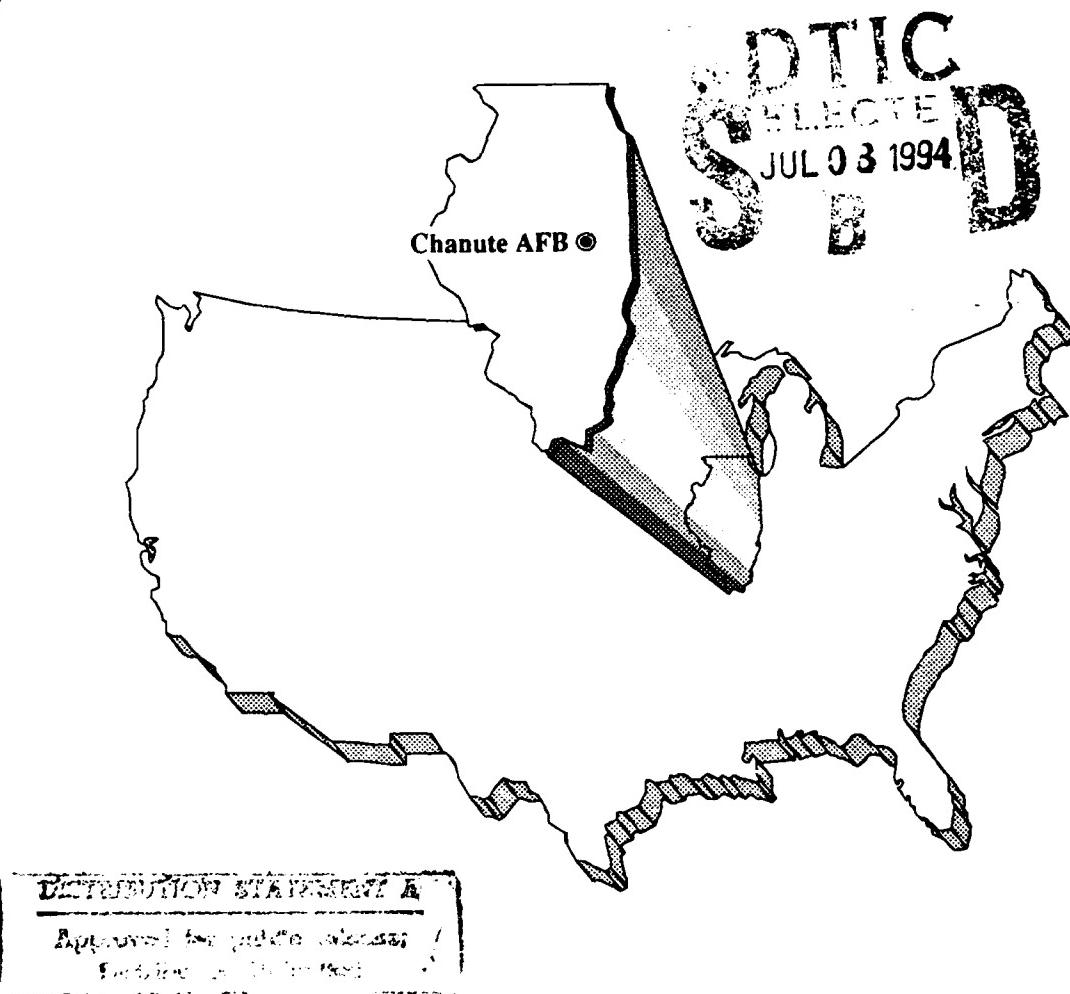




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FINAL
ENVIRONMENTAL IMPACT STATEMENT
July 1991



DISPOSAL AND REUSE OF
CHANUTE AIR FORCE BASE, ILLINOIS

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FINAL

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
CHANUTE AIR FORCE BASE,
ILLINOIS

U.S. Department of the Air Force

COVER SHEET

FINAL ENVIRONMENTAL IMPACT STATEMENT DISPOSAL AND REUSE OF CHANUTE AIR FORCE BASE, ILLINOIS

- a. Responsible Agency: U.S. Air Force
- b. Cooperating Agencies: Federal Aviation Administration, Great Lakes Region; Illinois Department of Transportation
- c. Proposed Action: Disposal and Reuse of Chanute Air Force Base (AFB), Champaign County, Illinois
- d. Written comments and inquiries on this document should be directed to: Lt. Col. Thomas J. Bartol, Director of Programs and Environmental Division, AFRCE-BMS/DEV, Norton Air Force Base, California, 92409-6448, (714) 382-4891.
- e. Designation: Final Environmental Impact Statement (EIS).
- f. Abstract: On 5 January 1989, the Secretary of Defense announced the closure of Chanute AFB, Illinois, pursuant to the Base Closure and Realignment Act. Previous environmental documentation culminated in the filing of a *Final Environmental Impact Statement for the Closure of Chanute AFB* in February 1990. A *Record of Decision* (ROD) for the action was signed in March 1990. The base is scheduled for closure by 30 September 1993. This EIS has been prepared in accordance with the National Environmental Policy Act to analyze the potential environmental consequences of the disposal and reasonable alternatives for reuse of the base. The EIS also describes the potential environmental consequences of actions that will be taken by the Federal Aviation Administration and the Illinois Department of Transportation with regard to development of aviation facilities for one of the reuse alternatives. This document includes analyses of the possible impacts each alternative may have on the local community, including population and employment, land use and aesthetics, transportation, utilities, hazardous materials/wastes, geology and soils, water resources, air quality, noise, biological resources and cultural resources. Potential environmental impacts are land use incompatibilities, increased aircraft-related noise levels, increased traffic, loss of prime farmlands, reduced wildlife habitat, alteration of topography, alteration of water flow and drainage patterns, temporary effects of elevated concentrations of particulate matter during construction, and possible effects on historic resources. Traffic mitigations include contributions to area roadway improvements. If avoidance of biological resources is not adequate or possible, mitigation in the form of replacement, restoration, or enhancement is possible. Because the Air Force is disposing of the property, some of the mitigation measures are beyond the control of the Air Force. Remediation of Installation Restoration Program sites is, and will continue to be, the responsibility of the Air Force.
per letter

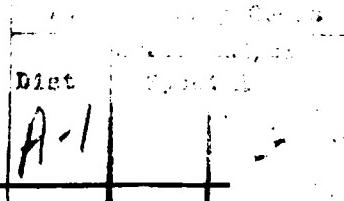


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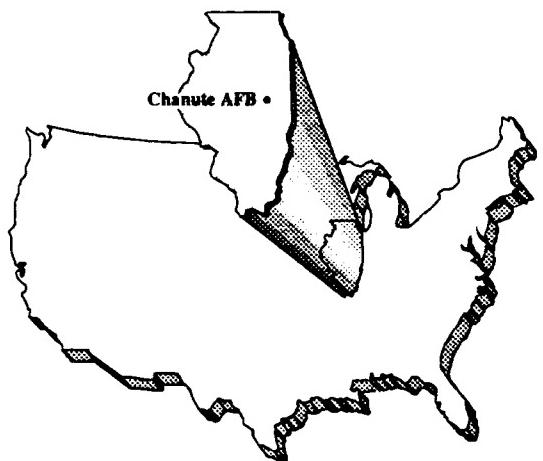
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SUMMARY

SUMMARY

PURPOSE AND NEED

In May 1988, the Secretary of Defense established the Commission on Base Realignment and Closure to examine the issue of military installation realignments and closures. On 24 October 1988, the Congress and the President endorsed the Commission and its charter by passing the Defense Authorization Amendments and Base Closure and Realignment Act (BCRA) (Public Law 100-526).

The Commission submitted its report to the Secretary of Defense on 29 December 1988. Chanute Air Force Base (AFB), Illinois, was one of the bases recommended by the Commission for closure. The Secretary of Defense approved the Commission's recommendations on 5 January 1989 and announced that the Department of Defense would implement them.

The BCRA also requires the Secretary of Defense to comply with the National Environmental Policy Act (NEPA) in the implementation of the base closures and realignments. The Secretary of Defense, through the Air Force, is preparing the required NEPA documents for the base closures. In February 1990, the Air Force released the *Final Environmental Impact Statement for the Closure of Chanute AFB*, which addressed environmental impacts associated with base closure. The *Record of Decision* (ROD) was published in March 1990.

The Air Force must now make a series of interrelated decisions concerning the disposition of the base property. In support of these decisions, this Environmental Impact Statement (EIS) has been prepared to provide information on the potential environmental impacts resulting from several alternatives for reuse of the base property after disposal. After completion and consideration of this EIS, the Air Force will prepare decision documents stating the terms and conditions under which the dispositions will be made, including the mitigation measures, if any, that will be taken by the Air Force or be required of the recipients. Similarly, the Federal Aviation Administration (FAA) and the Illinois Department of Transportation (IDOT) will prepare decision documents with regard to development of aviation facilities for one of the reuse alternatives. These decisions may affect the environment by influencing the nature of the future use of the property. Further environmental analysis and documentation may be required to address other actions that may be proposed in the future.

The Air Force selected as the Proposed Action reuse of Chanute AFB as a major aircraft maintenance facility for the purpose of evaluating the possible environmental impacts resulting from the incident reuse of the installation. This plan was developed by the IDOT and the Village of Rantoul as their Integrated Concept Plan for reuse of the base property. This proposal would entail redevelopment of Chanute AFB for aviation-related activities, including air maintenance, air cargo, and general aviation operations; educational and training; light industrial enterprise; health care; recreational; and residential use.

The following alternatives to the Proposed Action are also being considered:

- Redevelopment of the base to provide minor aircraft maintenance, air cargo, and general aviation operations. The difference from the Proposed Action is in the reduced size of the aircraft maintenance operations.
- Redevelopment of the base with non-aviation land uses such as industrial, educational/training, hospital/life-care, recreational, and residential.
- The No-Action Alternative, which entails the base remaining under federal control and being placed in caretaker status.

SCOPE OF STUDY

The *Notice of Intent* to prepare an EIS for the disposal and reuse of Chanute AFB was published in the *Federal Register* on 24 August 1990. Issues related to the disposal and reuse of Chanute AFB were identified in the closure scoping meeting held on 1 March 1989 at the Rantoul Township High School Gymnasium. The scoping period for the disposal and reuse of Chanute AFB was from late August to late September 1990. A public scoping meeting was held on 12 September 1990 at the Civic Center in the Village of Rantoul, Illinois. The comments and concerns expressed at these meetings were used to determine the scope and direction of studies and analyses required to accomplish this EIS.

This EIS discusses the potential environmental impacts associated with the Proposed Action and its alternatives. To provide the context in which potential environmental impacts may occur, discussions of potential changes to the local communities, including population and employment, land use and aesthetics, transportation, and community and public utility services are included in this EIS. In addition, issues related to current and future management of hazardous materials and wastes are discussed. Impacts to the physical and natural environment are evaluated for geology and soils, water resources, air quality, noise, biological resources, and cultural resources. These impacts may occur as a direct result of disposal and reuse actions or as an indirect result of changes to the local communities.

The baseline assumed in this document is the conditions projected at base closure on 30 September 1993. Impacts associated with disposal and/or reuse activities may then be addressed separately from the impact associated with base closure. General preclosure conditions and impacts of closure were addressed in the closure EIS (U.S. Air Force, 1990c). A reference to preclosure conditions (1988) is provided, where appropriate (e.g., air quality), to provide a comparative analysis over time. This will assist the decision maker and agencies in understanding potential long-term impacts in comparison to conditions when the installation was active.

The Air Force is also preparing a separate *Socioeconomic Impact Analysis Study* on the economic impacts expected in the region. That document, although not required by NEPA, will serve as a companion document to this EIS.

SUMMARY OF PUBLIC COMMENTS

The Draft EIS (DEIS) for disposal and reuse of Chanute AFB was made available for public review and comment in March-April 1991. A public hearing was held in Rantoul, Illinois, on 27 March 1991, at which the Air Force presented the findings of the DEIS. Public comments received both verbally at the public meeting and in writing during the response period have been reviewed and are addressed by the Air Force in Appendix K of this EIS. In addition, the text of the EIS itself has been revised, as appropriate, to reflect the concerns expressed in the public comments. The responses to the comments in Appendix K indicate the relevant sections of the EIS that have been revised.

The major comments received on the DEIS are as follows:

- The treatment of short-term impacts of base closure was considered to be inadequate.
- The treatment of socioeconomic impacts was considered insufficient.
- The reuse schedule assumptions are not considered very realistic regarding rapidity of growth.
- It is emphasized that the Air Force should clean up contaminated sites before transferring ownership.
- Problems associated with low flows to the Rantoul Wastewater Treatment Plant must be addressed.
- Asbestos both in buildings to be demolished and those that will remain must be managed in a way that minimizes or eliminates health risks.
- Effects of reuse construction and operations activities on wetlands and water bodies on and near the base must be described.
- Use of hazardous materials both before and after closure raise concerns about contamination risks.
- Reuse activities will result in a loss of prime farmland.
- Landfills must be identified that will accept demolition and construction debris.
- Additional reuses were suggested
- Concern was expressed about who will assume responsibility for utility systems on base and in Rantoul after closure.
- The Air Force is required to continue coordination for the evaluation of eligibility of historic structures on Chanute AFB.

Based on more recent studies, the following sections of the EIS have been updated:

- The discussion of the Rantoul Wastewater Treatment Plant (Sections 3.2.5.2 and 4.2.4)
- Land use zones and acreages in the Proposed Action and Minor Aircraft Maintenance Operations Alternative (based on modifications in the IDOT's Airport Layout Plan; Sections 2.2 and 2.3.1)

- The evaluation of potentially eligible historic properties (Sections 3.4.6 and 4.4.6)
- Discussion of the loss of prime farmland (see Sections 4.2.2.1 and 4.2.2.2)
- Evaluation of the proposed reuses with regard to Section 4(f) of the Department of Transportation Act (Section 4.5).

SUMMARY OF ENVIRONMENTAL IMPACTS

Influencing factors and potential environmental impacts associated with the Proposed Action and alternatives for reuse of Chanute AFB are summarized in Tables S-1 and S-2 and briefly described below.

PROPOSED ACTION

Local Community. In 1994, population and employment in the immediate area will decline as the base closes and construction for reuse is completed. Subsequently, redevelopment activities associated with the Proposed Action will result in increases in population and employment in the Village of Rantoul and Champaign and Ford counties. Total projected site-related regional population and employment are shown in Figure S-1. Approximately 6,050 direct jobs are projected by the year 2014, with an additional 6,000 indirect jobs in the two-county area. It is estimated that population in Rantoul would increase from the closure level by 5,790, or 57 percent, by 2014, and that the population in the Region of Influence (ROI) (Champaign and Ford counties) would increase by about 12,750, or 7 percent, over the closure level.

The Proposed Action would result in impacts to 576 acres of privately-owned prime farmland east of the base property. This land would be converted from agricultural use to support runway expansion and the development of the aircraft maintenance facility. In addition, three inhabited dwellings on this land would have to be relocated. Redevelopment land use plans may have minor conflicts with local zoning ordinances. Road rights-of-way (ROW) and avigational easements would also have to be established on and off base. The presence of Installation Restoration Program (IRP) sites may constrain or delay reuse at these sites until the extent of contamination is delineated and risk assessments and remedial designs have been implemented.

Increased traffic generated by the Proposed Action would decrease the level of service on Maplewood Drive to unacceptable levels. Proposed aircraft activities would have minimal affects on air traffic and airspace use in the region. Light emissions from the airfield are not expected to adversely affect occupied buildings or roadways. Minor increases in air and railroad transportation demand are expected.

Utility demands would increase above closure consumption levels as a result of the increasing population in the Village of Rantoul. Wastewater flows from the base area are expected to decline to a minimum of 1.3 million gallons per day (MGD) in 1994, then rise to an average flow of about 1.7 MGD in 2014. Some temporary adjustments and a higher degree of maintenance than is commonly

Table S-1. Summary of Influencing Factors for Reuse of Chanute AFB in the Year 2014

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Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
LOCAL COMMUNITY				
• Regional* Population				
- Site-related	Increase of 12,000 people	Increase of 3,100 people 179,400 people	Increase of 1,500 people 177,800 people	No change 176,300 people
- Total **	188,300 people			
• Regional* Employment				
- Direct	Increase of 6,050 jobs	Increase of 1,880 jobs	Increase of 1,230 jobs	No change
- Indirect	Increase of 6,000 jobs	Increase of 1,400 jobs	Increase of 150 jobs	No change
- Total **	142,120 jobs	133,350 jobs	131,450 jobs	130,070 jobs
• Traffic (trips generated)	Increase of 56,590	Increase of 37,445	Increase of 15,850	No change
• Flight Operations (annual)	Increase of 22,860	Increase of 20,980	No increase	No change
• Water Demand (gpd)	Increase of 2.6 million	Increase of 1.5 million	Increase of 0.9 million	No change
• Sewage Demand (gpd)	Increase of 1.3 million	Increase of 0.7 million	Increase of 0.4 million	No change
• Solid Waste Generation (cubic yards/day)	Increase of 100	Increase of 50	Increase of 30	No change
• Electricity Demand (MMWh/day)	Increase of 265	Increase of 140	Increase of 85	No change
• Natural Gas Demand (therms/day)	Increase of 13,925	Increase of 6,400	Increase of 3,885	No change
• Coal Demand (tons/day)	Increase of 80	Increase of 40	Increase of 20	No change

* Regional refers to the two-county region comprising Champaign and Ford counties.

** Total population/employment projections include both site-related effects and non-site-related growth.

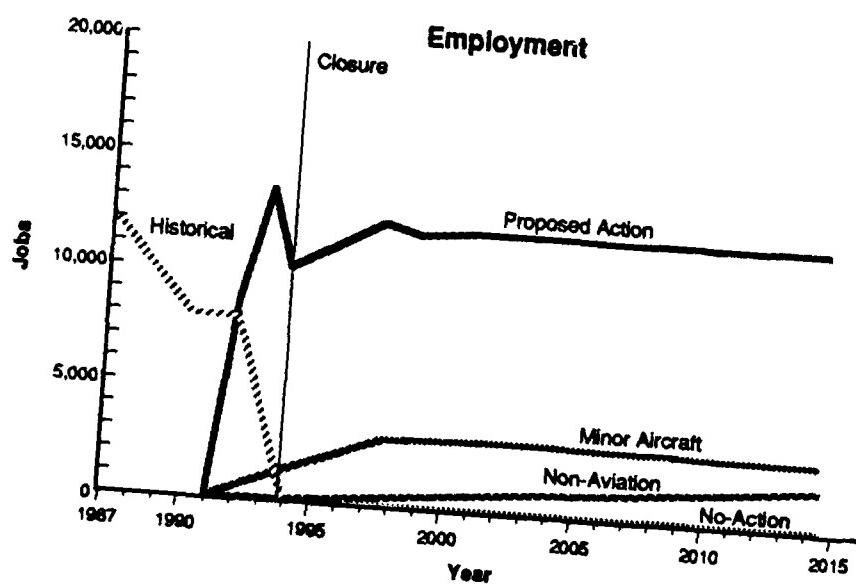
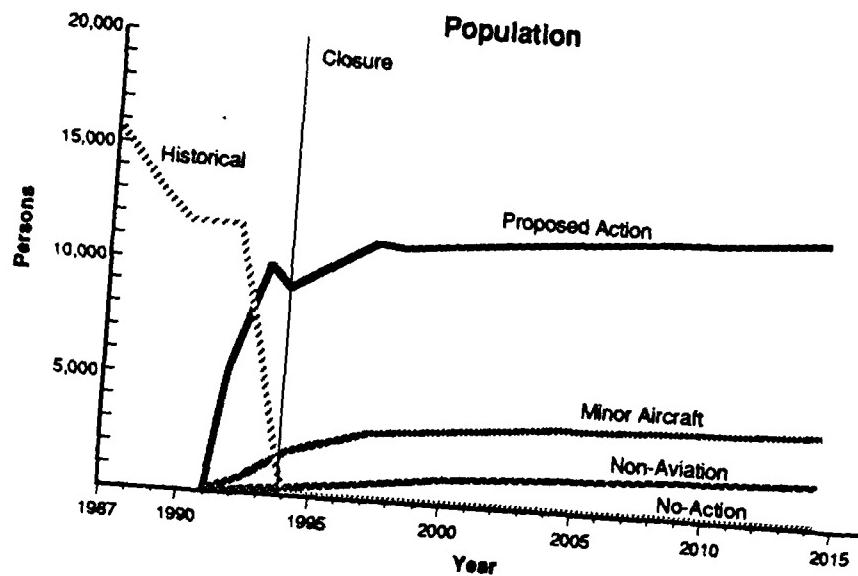
Table S-1. Summary of Influencing Factors for Reuse of Chanute AFB in the Year 2014

Page 2 of 2

Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
• Land Use	Acquisition of about 600 acres and avigation easements for 20 acres off base required. Relocation of 3 inhabited dwellings. Loss of 576 acres of prime farmland to airfield expansion and aviation maintenance facility.	Acquisition of about 230 acres. Avigation easements for 20 acres off-base. Loss of 231 acres of prime farmland to airfield expansion.	No property acquisition or avigation easements.	No change
HAZARDOUS MATERIALS/HAZARDOUS WASTE MANAGEMENT				
• Hazardous Materials	Increase in types and quantities. Effective management to be implemented.	Increase in types and quantities. Effective management to be implemented.	Increase in types and quantities. Effective management to be implemented.	No change
• Hazardous Waste	Increase in types and quantities. Effective management to be implemented.	Increase in types and quantities. Effective management to be implemented.	Increase in types and quantities. Effective management to be implemented.	No change
• IRP	No impact to IRP program	No impact to IRP program	No impact to IRP program	No impact to IRP program
• Storage Tanks	New tanks to be installed and managed	New tanks to be installed and managed	New tanks to be installed and managed	No change
• PCBs	No impact	Effective management strategies to be implemented for renovation/demolition	No impact	No change
• Asbestos	Effective management strategies to be implemented for renovation/demolition	Effective management strategies to be implemented for renovation/demolition	Effective management strategies to be implemented for renovation/demolition	No change
• Radon	No impact	No impact	No impact	No change
• Pesticides and Herbicides	Effective management to be implemented	Effective management to be implemented	Effective management to be implemented	No change
• Biomedical	No impact	No impact	No impact	No impact

Table S-2. Summary of Environmental Impacts of Reuse of Chanute AFB in the Year 2014

Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
NATURAL ENVIRONMENT	<ul style="list-style-type: none"> • Geology and Soils • Water Resources • Air Quality • Noise • Biological Resources • Cultural Resources 	<p>Minor increase in runoff and erosion during construction</p> <p>Potential impact on water flow and drainage patterns due to construction</p> <p>Increased emissions from aircraft operations, and motor vehicles and heating system will not exceed NAAQS or IAAQS</p> <p>No residences are within 65 DNL</p> <p>Loss of vegetation due to construction</p> <p>Adverse effect to historic structures due to potential transfer from Federal ownership. Potential impacts due to demolition and renovation.</p>	<p>Minimal increase in runoff and erosion due to limited construction activities</p> <p>Minimal impacts on drainage pattern due to limited construction</p> <p>Increased emissions from motor vehicles and heating system will not exceed NAAQS or IAAQS</p> <p>No residences are within 65 DNL</p> <p>Loss of vegetation due to construction</p> <p>Adverse effect to historic structures due to potential transfer from Federal ownership. Potential impacts due to demolition and renovation.</p>	<p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>Potential impacts to quality or integrity of historic properties.</p>



Site Related Regional* Population and Employment Effects

* Data refers to population and employment impacts within Champaign and Ford Counties directly or indirectly related to the Chanute AFB site.

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Chanute AFB
Rantoul, Illinois

Figure S-1

necessary may be required at the Rantoul Wastewater Treatment Plant, but no modifications in the plant or operations should be required. Utility corridors and easements would have to be obtained to connect new facilities with existing utility lines. Metering of utility systems may be required to integrate the utility systems with the Village of Rantoul.

Hazardous Materials/Hazardous Waste Management. Types and quantities of hazardous materials, hazardous waste, and pesticides/herbicides generated by the Proposed Action are expected to increase from closure conditions. The shift of responsibility for managing hazardous materials and waste from a single user to multiple, smaller, independent, users may result in a potential reduction in service because there may no longer be one on-site organization capable of responding to hazardous materials and hazardous waste spills. Reuse activities are not expected to adversely affect the remediation of IRP sites. Existing underground storage tanks (USTs) would be removed prior to closure in accordance with Resource Conservation and Recovery Act (RCRA) regulations. Demolition and renovation of structures with asbestos-containing materials would have to be managed in accordance with the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and other regulations.

Natural Environment. The aviation-related activities of the Proposed Action would increase noise levels. Prior to closure, the Village has experienced very limited aircraft noise. Day-night sound levels (DNL) of 65 to 75 decibels (dB) resulting from aircraft noise would likely affect up to 536 acres of land, but no residences lie within areas exposed to DNL of 65 dB or greater.

Potential impacts to biological resources could include loss of vegetation/habitat or degradation of wetlands as a result of construction and operation activities. There could be potential effects to the setting and integrity of historic resources as a result of the potential conveyance from federal ownership or other undertakings. Minor or no impacts on geology and soils, water resources, and air quality are expected.

MINOR AIRCRAFT MAINTENANCE OPERATIONS ALTERNATIVE

Local Community. Redevelopment activities associated with this alternative would generate smaller increases in population and employment than the Proposed Action. Total projected site-related regional population and employment are shown in Figure S-1. Approximately 1,880 direct jobs are projected by the year 2014, with an additional 1,400 indirect jobs in the two-county ROI. It is estimated that the population in Rantoul would increase from the closure level by 1,800, or 18 percent, by 2014, and that population in the ROI would experience an increase of about 3,820, or about 2 percent, over the closure level.

This alternative would result in impacts to 231 acres of privately-owned prime farmland east of the base, which would be converted from agricultural use to support runway expansion. Acquisition and relocation of the three inhabited dwellings would not be required. Redevelopment land use plans may have minor

conflicts with local zoning ordinances, similar to those in the Proposed Action. Road ROWs and avigational easements would have to be established on and off base. The presence of IRP sites may constrain or delay reuse at these sites until the extent of contamination is delineated and risk assessments and remedial designs have been implemented.

Traffic generated by this alternative would decrease the level of service on Maplewood Drive to unacceptable levels. As with the Proposed Action, aircraft activities would have minimal effects on air traffic and airspace use in the region. Light emissions from the airfield are not expected to adversely affect occupied buildings or roadways. Minor increases in air and railroad transportation demand are expected.

Effects on the existing wastewater treatment system would be similar to those of the Proposed Action. New utility corridors and easements would not likely be required because no new utility construction is anticipated.

Hazardous Materials/Hazardous Waste Management. Types of hazardous materials, hazardous waste, and pesticides/herbicides associated with this alternative are expected to be similar to those used for the Proposed Action, but the quantities used would be smaller. The effects would likely be similar to those of the Proposed Action.

Natural Environment. The aviation-related activities of this alternative would generate aircraft noise. Approximately 476 acres of land would be affected by noise levels of DNL 65 dB or greater, but no residences lie within areas exposed to DNL of 65 dB or greater.

Potential impacts to biological resources could include loss of vegetation/habitat or degradation of wetlands caused by construction and operation activities. There could be potential effects to the integrity and setting of historic resources as a result of the potential conveyance from federal ownership or other undertakings. Minor or no impacts on geology and soils, water resources, and air quality are expected.

NON-AVIATION ALTERNATIVE

Local Community. Redevelopment activities associated with this alternative would generate smaller long-term increases in population and employment than the Minor Aircraft Maintenance Operations Alternative. Total projected site-related regional population and employment are shown in Figure S-1. Approximately 1,230 direct jobs are projected by the year 2014, with an additional 150 indirect jobs in the two-county ROI. It is estimated that the population in Rantoul would increase from the closure level by 1,170, or 12 percent, by 2014, and that population in the ROI would experience a net increase of about 2,280, or 1 percent, over closure conditions.

This alternative would require no property acquisition. Redevelopment land use plans may have moderate conflicts with local zoning ordinances. No avigational easements or road ROWs would be required.

Traffic generated by this alternative would not adversely affect the level of service on key roadways. Minor increases in air and railroad transportation are expected.

No effects to the existing utility systems are anticipated, with the exception of the wastewater system. The wastewater system effects would be similar to those associated with the other alternatives.

Hazardous Materials/Hazardous Waste Management. Types and quantities of hazardous materials, hazardous waste, and pesticides/herbicides associated with the alternative are expected to vary. The effects of this alternative would likely be similar to those of the Proposed Action.

Natural Environment. There would be no aircraft-related increases in noise levels. Surface traffic noise levels on site would not likely increase over closure levels. Minor, local impacts caused by loss of vegetation/habitat or degradation of wetlands are anticipated as a result of the minimal construction activities. Minor or no impacts on geologic resources, soils, water resources, air quality, noise, and cultural resources are expected.

NO-ACTION ALTERNATIVE

Local Community. The only activities associated with the No-Action Alternative would be disposal management activities, creating less than 100 direct and indirect jobs. This alternative would not result in any increases in employment or population compared to closure levels.

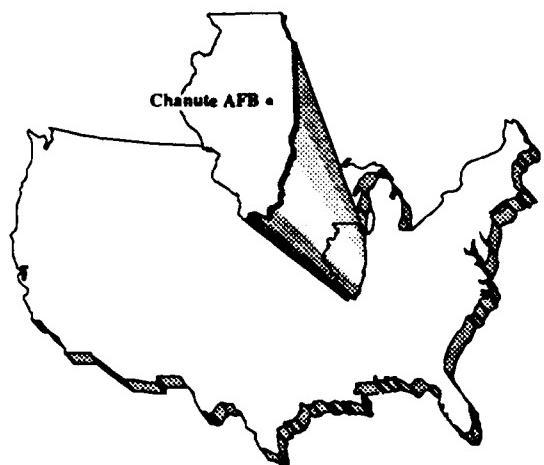
No adverse land use effects are anticipated. The on-base structures would be left in place and maintained in a caretaker status. No effects on road, air, or railroad transportation are expected.

Adverse impacts to the wastewater system may be caused by low flows. Modifications to the system could be required to accommodate long-term decreased flows and ensure that discharged effluent continues to meet applicable standards.

Hazardous Materials/Hazardous Waste Management. Small quantities of various types of hazardous materials, hazardous waste, and pesticides/herbicides would be used for this alternative and managed by the caretaker contractor in accordance with all applicable regulations. Security of IRP sites would be enhanced under this alternative. All USTs would have to be removed and provisions would be made for sufficient maintenance of above-ground tanks.

Natural Environment. Beneficial effects on geological resources, soils, water resources, air quality, noise, and biological resources are expected as a result of the lack of reuse development and operations. The limited maintenance planned under the No-Action Alternative may result in deterioration in the quality or integrity of historic buildings on base.

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CHAPTER 1

PURPOSE AND NEED FOR ACTION

1.0 PURPOSE AND NEED FOR ACTION

This environmental impact statement (EIS) examines the potential impacts to the environment resulting from the disposal and reuse of Chanute Air Force Base (AFB), Illinois. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) regulations implementing the NEPA. Appendix A presents a glossary of terms, acronyms, and abbreviations used in this document.

1.1 PURPOSE AND NEED

The Proposed Action addressed in this EIS is the disposal of Chanute AFB in whole or part to other federal agencies, public entities, and/or private organizations. The disposal of Chanute AFB is authorized by the provisions of the Base Closure and Realignment Act (BCRA) of 1988 (Public Law 100-526) and the recommendations of the Secretary of Defense's Commission on Base Realignment and Closure. The Secretary of Defense established the Commission on Base Realignment and Closure in May 1988 to recommend military installations for realignment and closure. The Commission was to use the military value of the installation as the primary criterion in identifying candidate bases. Congress and the President endorsed the Commission and its charter by passing the Defense Authorization Amendments and BCRA on 24 October 1988. This legislation required the Secretary of Defense to implement or reject the Commission's recommendations in their entirety.

On 29 December 1988, the Commission submitted its report to the Secretary of Defense, recommending realignments and closures affecting 145 military installations. Of these installations, 86 are to be closed, including Chanute AFB. The Secretary of Defense approved the Commission's recommendations on 5 January 1989 and announced that the Department of Defense (DOD) would implement the realignment and closures of the selected installations. Congress did not pass a joint resolution disapproving the Commission's recommendations and the Commission's recommendations on base closures were thereby approved.

Under the provisions of the BCRA, the Secretary of Defense must initiate the recommended closures and realignments by 30 September 1991 and complete them before 30 September 1995. Chanute AFB is scheduled for closure by 30 September 1993. The disposition of Chanute AFB will be in compliance with the Defense Authorization Amendments, the BCRA, and the Federal Property and Administration Services Act of 1949.

The decisions to be made by the Air Force regarding Chanute AFB property include the following:

- If, how, and when the property will be divided into parcels for disposal (parcelization)
- What disposal method will be used for each parcel, for example:
 - transfer to another federal agency
 - public benefit conveyance to an eligible entity
 - negotiated sale to a public body
 - sealed bid or auction to the general public
- What mitigation measures are needed for Air Force actions that cause environmental impacts.

The EIS will also support Federal Aviation Administration (FAA) and Illinois Department of Transportation (IDOT) decisions regarding development of aviation facilities for one of the reuse alternatives. The purpose and need for the Proposed Action is to enhance the aviation capacity of the State of Illinois, particularly east-central Illinois. Chanute Field has been designated as a reliever airport to O'Hare International Airport. Both the FAA and the State of Illinois have identified Rantoul as a suitable area for development of general aviation facilities. Reuse of Chanute AFB property as a general aviation reliever airport would be in accordance with these recommendations. Further environmental analysis and documentation may be required to address other actions that may be proposed in the future.

1.2 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The BCRA also requires compliance with the NEPA (with some exceptions) in the implementation of the base closures and realignments. The issues that were excluded from NEPA compliance are:

- The selection of installations for closure or realignment
- The establishment of the Commission
- The Secretary of Defense's acceptance of the Commission's recommendations.

The Secretary of Defense, through the Air Force, is preparing the required NEPA documentation at each stage of the base closure process. In February 1990, the Air Force released the *Final Environmental Impact Statement for the Closure of Chanute AFB*, with the *Record of Decision* (ROD) published in March 1990. That document addressed the environmental impacts associated with closure. The ROD is presented in Appendix B of this EIS.

The Air Force has prepared this EIS to provide information on the potential environmental impacts of federal decisions regarding the disposal and incident reuse of Chanute AFB. Following the completion and consideration of this EIS, the Air Force will make a series of interrelated decisions regarding disposal and

parcelization of the base property. The federal decision documents, such as the ROD, will state the terms and conditions under which disposal will be made, including the mitigation measures, if any, that will be taken by the Air Force or required of the recipients. These decisions may affect the environment by determining or influencing the nature of the future use of the property.

Because the parcelization and disposal methods do not directly affect the environment, this EIS will focus on the environmental impacts associated with the reuse implemented by future owners. The Air Force will use the redevelopment plans developed by the state and local community as the Proposed Action for the purpose of conducting the required environmental analysis. In addition, the Air Force will also analyze the environmental impacts associated with other reasonable reuse alternatives to ensure that all potential environmental impacts have been identified. The recipients of the property will subsequently make decisions with regard to the reuse of the property. Four alternatives have been identified. These include two aviation reuse proposals, a non-aviation reuse, and a no-action alternative that involves no reuse.

The FAA, Great Lakes Region, is a cooperating agency in the preparation of this EIS. The FAA has jurisdiction regarding reuse of a portion of the property as a civilian airport. Its jurisdiction arises from its authority to approve airport layout plans, which are required for federally funded public-use airports. The agency also has special expertise and a responsibility to make recommendations to the Air Force on the disposal of surplus property for airport use. The potential environmental impacts of airport development must be assessed prior to committing federal funding, in accordance with the NEPA and FAA Orders 1050.1D, *Policies and Procedures for Considering Environmental Impacts*, and 5050.4A, *Airport Environmental Handbook*.

The FAA has granted the IDOT the power to act as the federal decision-maker for the FAA regarding any aviation-related reuse of Chanute AFB. The State Block Grant Program authorizes this action and provides the IDOT with the discretionary funding for non-primary airfields (those without scheduled passenger service). Until the State Block Grant Program expires or instrument procedures are developed and implemented, the reuse project will not become an FAA federal action. The FAA has authority to approve facilities for an instrument landing system (ILS) or to issue a limited Federal Aviation Regulation (FAR) Part 139 certificate (airport certification program), which may be needed for this action. If the State Block Grant Program is not funded beyond its current extension of 1992, then the FAA could become more directly involved with the environmental impact analysis process.

This EIS provides the assessment of potential environmental impacts of the proposed airport layout required by the NEPA and FAA regulations. It also provides environmental assessment information to aid FAA decisions on funding requests for airport development projects. If the runway and associated land are conveyed and developed as an airport, the new owners will be required

to prepare an airport layout plan and submit it to the IDOT as appropriate for approval.

This EIS analyzes the socioeconomic impacts of disposal and reuse of Chanute AFB property only to the extent that those impacts affect the natural or physical environment. A concurrent study (*Socioeconomic Impact Analysis Study, U.S. Air Force, 1991b*) analyzes in greater detail the socioeconomic impacts of the base closure and disposal and reuse of the base property. It describes the effects on the local communities and the transition of activities on the base from conditions prior to closure through redevelopment, in an effort to address the concerns of state and local agencies and the general public regarding those issues.

1.3 SCOPING PROCESS

The scoping process identifies the significant issues relevant to the Proposed Action and provides an opportunity for public involvement in the development of the EIS in accordance with NEPA requirements. At the Chanute AFB Closure Scoping Meeting held on 1 March 1989 at the Rantoul Township High School Gymnasium, various issues related to the disposal and reuse of the base were identified.

The *Notice of Intent* (Appendix C) to prepare an EIS for disposal and reuse of Chanute AFB was published in the *Federal Register* on 24 August 1990. Local notification of the public scoping meeting was achieved through the media within a 75-mile radius of the base.

The scoping period for the disposal and reuse of Chanute AFB was from late August to late September 1990. A public meeting was held on 12 September 1990 at the Civic Center in the Village of Rantoul, Illinois, to solicit comments and concerns from the general public. Approximately 80 people attended the meeting. Representatives of the Air Force presented an overview of the meeting's objectives, agenda, and procedures, and described the process and purpose for the development of a Disposal and Reuse EIS. In addition to verbal comments, several written comments were received during the scoping process. These comments, as well as information from previous Air Force scoping and Base Reuse Executive Council meetings, were used to determine the scope and direction of studies/analysis to accomplish this EIS. Copies of the Draft EIS were sent to all interested parties. Comments have been incorporated into this Final EIS (FEIS); Appendix D contains the distribution list for the FEIS.

1.3.1 Summary of Scoping Issues and Concerns

The issues and concerns raised during the scoping process for consideration in this EIS are discussed below.

Hazardous Waste

- Concern was expressed regarding asbestos-containing materials in landfills and in buildings on base, their disposal, and environmental clean-up commitments.
- Comments were made that the Air Force and the Village of Rantoul need to work closely with all appropriate federal, state, and local agencies to expedite a smooth transition for the reuse of Chanute AFB.
- Several speakers commented that significant attention must be afforded to the environmental cleanup of base property. They felt that the cleanup must focus on the elimination of hazardous waste and on health and aesthetic concerns.

Natural Resources

- Concern was expressed regarding the land use changes that would negatively affect prime farmland, wildlife habitat, wetlands, erosion, and sedimentation.
- A commenter asserted that requests for the use of Chanute AFB property that are detrimental to the Village of Rantoul and the surrounding area should be dismissed in favor of others that will not only be positive for the community, but will also be beneficial to our nation.
- Speakers expressed concern over the proposed acquisition of additional land for lengthening the runway. Some of the issues that need to be considered are potential damage to drainage for adjacent farmland, i.e., blockage of surface flow or severance of drainage pipes; potential severance of small parcels of land, creating difficulty for the economic operation of agricultural enterprises; and potential interference with access to adjacent fields.
- It was suggested that the proper disposition of the Parks and Recreation facilities at Chanute AFB is crucial to providing a balanced allocation of parks, natural areas, and recreation facilities to meet the needs of the area's present and future population.
- Commenters expressed the opinion that cooperation with the Village and appropriate agencies is imperative in the acquisition and transfer of public benefit lands and facilities. It was requested that the facilities and greenspace areas be transferred to the Village of Rantoul at no cost through the public benefit allowance transfer.

Infrastructure

- Comments and questions were raised regarding the current contract for wastewater services and how the Air Force intends to deal with wastewater services in base disposal.
- An inquiry was made as to whether the Public Works Reuse Committee will require an independent study regarding the feasibility of converting the steam plant to operate on natural gas.
- It was requested that the electrical distribution system be transferred to the Village and that the Village maintain control over all major components of the infrastructure at Chanute AFB.

- It was urged that cooperation must be given to the Village and its administration in the transfer of utilities and infrastructure, and succinct maintenance agreements need to be adopted during the period of transition and thereafter, as necessary.
- Concern was expressed with regard to maintenance of additional community property. The Village of Rantoul will double in area and the revenues will be halved as a result of base closure. The cost of acquiring necessary equipment for the maintenance of the infrastructure was of prime concern for the community. It was requested that the Air Force provide adequate equipment to last until the land is developed sufficiently to pay for general maintenance, police and fire protection.

1.3.2 Issues Beyond the Scope of the EIS

Concerns and issues that are beyond the scope of this EIS were also expressed during the scoping process. These issues, and the reasons they are not included in this EIS, are identified below. In general, issues were determined to be beyond the scope of this EIS if they were either not significant or if they have been or are being addressed by other surveys and studies.

Installation Restoration Program - The Air Force is currently conducting an Installation Restoration Program (IRP) that defines and implements the necessary procedures for the remediation of hazardous materials releases at Chanute AFB. The IRP is a separate process being conducted concurrently with the analysis of the disposal and reuse EIS; final assessments and findings of the IRP are not yet completed. Consideration of IRP management and analysis procedures are beyond the scope of this EIS; however, IRP issues are discussed herein to provide a baseline for the affected environment.

Socioeconomics - Effects upon the physical or natural environment as a result of potential changes in certain socioeconomic factors that are associated with or caused by the disposal and subsequent reuse of the base are addressed within this EIS. Other socioeconomic issues, such as the region's employment base, school budgets, municipal/state tax revenues, municipal land planning, medical care for military retirees, and dependents, local governments and services, real estate, and economic effects on utility systems and specific businesses are beyond the scope of NEPA and CEQ requirements. Analysis of impacts associated with these issues is provided in the *Socioeconomic Impact Analysis Study*; that public document will also support the base reuse decision-making process. The environmental impact analyses presented in this EIS are based on the results of the socioeconomic analyses described in detail in the *Socioeconomic Impact Analysis Study*.

1.4 RELATED ENVIRONMENTAL DOCUMENTS

The environmental documents listed below have been prepared separately and address environmental issues at Chanute AFB. These documents provided supporting information for the environmental analysis.

- *Environmental Assessment for Disposal and Reuse of Chapman Court, Chanute AFB, Illinois*
- *Final Environmental Impact Statement for the Closure of Chanute Air Force Base*
- *Environmental Assessment for the Reactivation of Runway 18/36 at Chanute AFB, Illinois*
- *Environmental Study for the Conversion of 345 Acres of Agricultural Land Adjacent and Directly East of Chanute Air Force Base for Development and the Associated Roadway Work.*

1.5 RELEVANT FEDERAL, STATE, AND LOCAL STATUTES, REGULATIONS, AND GUIDELINES

Federal, state, and local statutes, regulations, and guidelines with which the proponent and cooperating agencies must comply as related to this disposal and reuse EIS are presented in Table 1.5-1.

Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines**Page 1 of 5**

Resource	Project Activity	Regulation/Authority	Agency
Air Quality	Changes in vehicle traffic levels or aircraft operations; changes in emissions from construction activity or the establishment or removal of any stationary source of emissions.	The Clean Air Act, 42 U.S.C. §§ 7401 et seq.; 40 C.F.R. Parts 50-87; Ill. Rev. Stat. Ch. 111 1/2, Environmental Protection Act	U.S. Environmental Protection Agency, Illinois Environmental Protection Agency
	Analysis of environmental impact of development or improvement of a public airport.	Federal Aviation Administration (FAA) Order 5050.4a.	U.S. Department of Transportation - Federal Aviation Administration
	Improvement of a federally funded highway project.	23 U.S.C. § 109 (Standards for Federal Aid Highways); The Clean Air Act, 42 U.S.C. § 7506; Air Quality Conformity and Priority Procedures for use in Federal-Aid Highway and federally - funded Transit Programs, 23 C.F.R. Part 770.	U.S. Department of Transportation - Federal Highway Administration
Biological Resources	Consultation regarding federal or federally permitted projects to impound, divert, or control surface waters with a total surface area greater than 10 acres.	Fish and Wildlife Coordination Act, 16 U.S.C. §§ 1661 et seq.	Department of Interior - U.S. Fish and Wildlife Service
	Dredge and fill activities in jurisdictional wetlands.	Clean Water Act, 33 U.S.C. §§ 1251 et seq.; Executive Order 11990 (Protection of Wetlands).	U.S. Environmental Protection Agency; Department of Defense - Army Corps of Engineers; Illinois Environmental Protection Agency
	Activities that may affect habitat of migratory birds.	Migratory Bird Treaty Act 16 U.S.C. §§701 et seq.; 50 C.F.R. Part 21.	Department of Interior - U.S. Fish and Wildlife Service
	Development in or over navigable waters.	The Rivers and Harbors Act, 33 U.S.C. § 401 et seq.	Department of Defense - U.S. Army Corps of Engineers; U.S. Department of Transportation

Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines**Page 2 of 5**

Resource	Project Activity	Regulation/Authority	Agency
Biological Resources (cont'd)	Reservoir development and stream modification projects including specific fish and wildlife habitat improvements.	Watershed Protection and Flood Prevention Act, 16 U.S.C. §§ 1001 et seq., 33 U.S.C. § 701-1.	U.S. Department of Agriculture - Soil Conservation Service
	Transportation programs or projects that may require the use of any publicly-owned land of a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance.	Department of Transportation Act of 1966 49 U.S.C. § 303(c) (formerly 49 U.S.C. § 1653 (f) [1982])	U. S. Department of Transportation
	Ensuring that necessary actions are taken for the prevention, control, and abatement of environmental pollution from federal facilities and activities under the control of the agency.	Executive Order 12088 (Federal Compliance with Pollution Control Standards).	Department of Defense - U.S. Air Force
	Project activities that may affect Illinois-listed endangered and threatened species.	Illinois Endangered Species Protection Act of 1972, as amended (Ill. Rev. Stat. Ch.8, para 341 [1972]); Illinois Executive Order No. 7 (1985), Protection of Endangered Species and Natural Areas.	Illinois Department of Conservation
	Project activities that may affect wetlands.	Interagency Wetland Policy Act of 1989, Ill. Rev. Stat. Ch. 96-1/2, para. 9701-1 et seq. (1989)	Illinois Department of Conservation
	Project activities that may affect properties with archaeological, historic, architectural, or cultural value that are listed or eligible for listing in the National Register of Historic Places.	Historic Sites Act, 16 U.S.C. §§ 461 et seq.; National Historic Preservation Act, 16 U.S.C. §§ 470 et seq.; Protection of Historic and Cultural Properties, 36 C.F.R. Part 800; National Register of Historic Places, 36 C.F.R. Part 60;	Department of Interior - National Park Service; Advisory Council on Historic Preservation- Illinois State Historic Preservation Office

Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines**Page 3 of 5**

Resource	Project Activity	Regulation/Authority	Agency
Cultural Resources (cont'd)		Illinois Historic Preservation Act of 1976, Ill. Rev. Stat Ch. 127 §§ 133 d1 seq.; State Agency Historic Resource Preservation Act, Ill. Rev. Stat. Ch. 127 § 133 c 21 et seq.; Determinations of Eligibility for Inclusion in the NRHP, 36 C.F.R. Part 63; The Secretary of the Interior's Standards for Historic Preservation Projects, 36 C.F.R. Part 68 (Executive Order 11593).	
	Transportation programs or projects that will require the use of or have significant impacts on land of an historic site of national, state, or local significance.	Department of Transportation Act of 1966 (Public Law 89-670), 49 U.S.C. 303, Section 4(f).	U.S Department of Transportation
Land Use	Disposal of dwellings.	McKinney Homeless Assistance Act, 42 U.S.C. § 11411.	Department of Housing and Urban Development - Department of Health and Human Services
	Conveyance of federal properties comprising Chanute AFB.	Federal Property Administrative Services Act , 40 U.S.C. § 471 et seq.; Base Closure and Realignment Act of 1988, Pub. L. No. 100-526.	U.S. Environmental Protection Agency; Department of Defense - U.S. Air Force
	Reuse of Chanute AFB property.	Village of Rantoul Zoning Ordinance, 1991.	Village of Rantoul
	Control of height of objects around an airport.	14 C.F.R. Part 77	U.S. Department of Transportation - Federal Aviation Administration

Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines

Page 4 of 5

Resource	Project Activity	Regulation/Authority	Agency
Soils	Purchase and development of agricultural land adjacent to Chanute AFB for project purposes.	Farmland Protection Policy Act, 7 U.S.C. §§ 4201 et seq.; Farmland Preservation Act, Ill. Rev. Stat., Ch. 5, §§ 1301 et seq.; Illinois Executive Order No. 4 (1980), Preservation of Illinois Farmland	U.S. Department of Agriculture - Soil Conservation Service; Illinois Department of Agriculture
	Airport construction activities that may affect air and water quality as a result of soil erosion.	Federal Aviation Administration Advisory Circular 150/5370-10, standards for specifying construction of airports	U.S. Department of Transportation - Federal Aviation Administration
Transportation	Aviation safety and noise abatement.	Federal Aviation Regulation, Part 150.	U. S. Department of Transportation - Federal Aviation Administration
Waste Management	Remediation of past discharges of hazardous substances.	Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 et seq.; Executive Order 12580 (Superfund Implementation); Ill. Rev. Stat. Ch. 111 1/2, Environmental Protection Act.	General Services Administration - U.S. Air Force; Illinois Environmental Protection Agency
	Generation and temporary storage of hazardous substances.	Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 et seq.	U.S. Environmental Protection Agency; Department of Defense - U.S. Air Force; Illinois Environmental Protection Agency
	Identification of asbestos-containing materials in base facilities.	Air Force Policy; Management of Asbestos at Closing Bases.	Department of Defense - U.S. Air Force
	Disposal of pesticides and pesticide containers.	Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136 et seq.	U.S. Environmental Protection Agency; Department of Defense - U.S. Air Force

Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines
Page 5 of 5

Resource	Project Activity	Regulation/Authority	Agency
Waste Management (Cont'd)	Closure of underground storage tanks.	Resource Conservation and Recovery Act, 42 U.S.C. §§ 6991 - 6991l.	U.S. Environmental Protection Agency; Department of Defense - U.S. Air Force
	Location of PCB-contaminated electrical equipment.	PCB Transformer Fire Rule, 50 Fed. Reg. 29, 177.	Illinois Fire Marshall
Water Resources	Establishment of safe water regulations and maximum contaminant levels applicable, with minor exceptions, to public systems.	Safe Drinking Water Act (Public Law 95-523), as amended, Subchapter XII, Safety of Public Water Systems, Part B.	U.S. Environmental Protection Agency
	Discharge of wastewater.	Clean Water Act, 33 U.S.C. §§ 1251 et seq.; The National Pollution Elimination Discharge System, 40 C.F.R. Part 122; Ill. Rev. Stat. Ch. 11 1/2, Title X, Environmental Protection Act-Permits.	U.S. Environmental Protection Agency; Department of Defense - U.S. Air Force; Illinois Environmental Protection Agency
	Discharge of dredge or fill material into waters of the United States.	Clean Water Act, 33 U.S.C. §§ 1251 et seq.; 40 C.F.R. Part 230.	Department of Defense - U.S. Army Corps of Engineers



CHAPTER 2

ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section describes the Proposed Action, reasonable alternatives to the Proposed Action, and the No-Action Alternative. In addition, potential federal transfers of Chanute AFB properties and facilities from the DOD to other federal agencies are described. Other alternatives that were identified but eliminated from further consideration because they were unreasonable are briefly described. The potential environmental impacts of the Proposed Action and alternatives are summarized in table form.

2.1 INTRODUCTION

The BCRA legislates the delegation of federal authority and consultative requirements. Federal property management regulations address disposal methods associated with base closure. Permissible disposal methods include transfer to another federal agency, public benefit conveyance to an eligible agency, negotiated sale to state or local government, and public sale by auction or sealed bid. Because these disposal methods are valid in the disposal of Chanute AFB either in its entirety or in some form of parcelization, it is possible that different methods of disposal will be assigned to different parcels on Chanute AFB.

Current provisions of the BCRA require that the Air Force first notify other DOD departments that Chanute AFB is scheduled for disposal. Any proposals from other DOD departments for the reuse of Chanute AFB property are given priority consideration, if the proposer is willing to pay. As part of the McKinney Act (Public Law 100-77), the Department of Housing and Urban Development determines the suitability of excess buildings and other land for use by homeless assistance providers. Subsequently, the property will be made available to federal, state, and local agencies and the public.

2.2 DESCRIPTION OF PROPOSED ACTION

The State of Illinois and the Village of Rantoul are responsible for planning the future use of the disposed property at Chanute AFB. The IDOT has the responsibility to coordinate the redevelopment efforts of Chanute AFB as charged by Governor Jim Edgar and former Governor James R. Thompson.

The Village of Rantoul contracted with the Urban Land Institute (ULI); Crawford, Murphy, and Tilly, (CMT) Incorporated; and EDAW, Incorporated to prepare studies of alternative ways that Chanute AFB could be converted to civilian use. The consulting teams, in conjunction with the local community and state and federal agencies, identified various area-specific land uses that could be developed on the Chanute AFB property. The IDOT and the Village of Rantoul

combined the features and ideas of the three studies into a single integrated land use concept, the Integrated Concept Plan. The Air Force has included this plan in the EIS as the Proposed Action for the purpose of analyzing potential environmental impacts of incident reuse.

Under the Proposed Action (Figure 2.2-1), the existing aviation technical training resources of Chanute AFB would be used to develop aviation-related land uses as well as non-aviation areas. The FAA, in the National Plan of Integrated Airport Systems (NPIAS), identified Rantoul as an area requiring the development of general aviation facilities. In 1976, the Illinois State Airport System Plan also identified Rantoul as an area for possible development of general aviation facilities. In the NPIAS of 1990, the FAA designated Chanute Airfield as a general aviation reliever for O'Hare International Airport (Appendix E). The Proposed Action would enhance the aviation capacity of the State of Illinois, particularly east-central Illinois. Phase II of the Airport Layout Plan for Chanute AFB has been prepared and submitted for approval. This plan, which is required by the FAA for federally funded public-use airports, identifies the airport requirements and describes the proposed runways, taxiways, and other facilities.

The goal of the Proposed Action is the maximum reuse of the existing facilities and infrastructure at Chanute AFB to the fullest extent possible in a short time period. The primary land uses include major aircraft maintenance operations, an educational campus, and a hospital/life-care facility. Components of the Proposed Action include expansion of an existing airfield to a 10,000-foot primary runway and one 5,000-foot cross-wind runway; aviation support areas with capabilities to support major aircraft maintenance/training operations, air cargo operations, and minor general aviation operations; education and training areas; medical; industrial; commercial; recreation; and residential areas. The total acreage of each land use category is shown in Table 2.2-1. Off-base property acquisition needs are discussed in the applicable land use category descriptions below.

2.2.1 Airfield

This land use zone includes a total area of 785 acres (all acreages used in this document are approximate). The airfield includes the runways, taxiways, parking aprons, and navigational aids required for general aviation purposes. The airfield would be used by a variety of aircraft to support several aviation-related operations such as major aircraft maintenance operations, air cargo operations, and minor general aviation operations. New aircraft maintenance operations would support the growing demand for aircraft maintenance in the airline industry. Air cargo operations would provide timely support in production requirements for existing industries as well as potential new industries in east-central Illinois.

Integrated Concept Plan (Proposed Action)

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- ① Airfield
 - ② Aviation Support
 - ③ Institutional (Educational) Training
 - ④ Industrial
 - ⑤ Institutional (Medical)
 - ⑥ Commercial
 - ⑦ Public/Recreation
 - ⑧ Residential
- Base Boundary
Off-Base Avigational Easement
Road Improvements

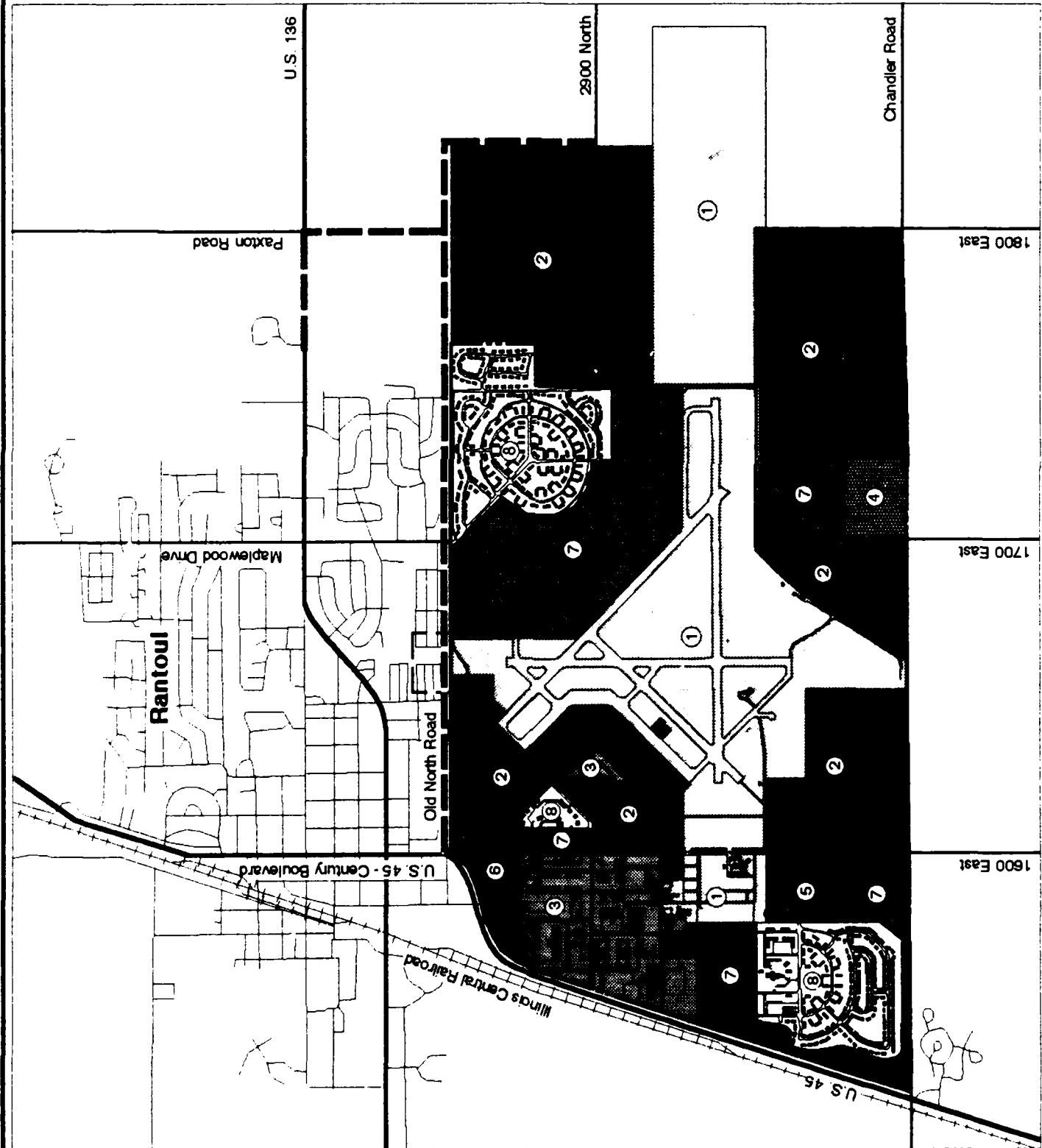


Figure 2.2-1

Table 2.2-1. Land Use Acreage - Proposed Action

Base Property	Acreage
Airfield	554
Aviation Support	609
Institutional (Education/Training)	161
Industrial	33
Institutional (Medical)	40
Commercial	34
Recreation	405
Residential	285
Subtotal	2,121
 Off-Base Property	
Airfield - acquisition	231
Airfield - navigational easements	20
Aviation Support - acquisition	345
Subtotal	596
TOTAL	2,717

As part of the airport-related activities, a preliminary airport layout plan has been developed (Hanson Burke, Inc., no date). The runway orientation on the Airport Layout Plan uses the existing runway layout at Chanute AFB. Much of the needed pavement already exists. Other orientations were considered but dismissed because they would have similar or greater adverse impacts, and additional facilities would probably have to be relocated. Under the proposed layout, no residences would be in areas exposed to day-night noise levels (DNL) of 65 decibels (dB) or greater; therefore, significant noise impacts would not be anticipated. The proposed layout would not require dredge and fill activities within wetlands. The airport layout plan (Figure 2.2-2), which is required for federally funded public-use airports, must be approved by the IDOT, under the State Block Grant program. Detailed airfield improvements are discussed below. The airport boundary shown in the airport layout plan may differ from the aviation-related land use boundaries shown in Figure 2.2-1. The airport boundary in the airport layout plan includes land with direct aeronautical-related uses and surrounding lands of sufficient size to produce revenue capable of keeping the airport financially self-sustaining. The airport boundary has yet to be finalized, but the location of the boundary will not affect the environmental impact analysis.

Real estate interests for 231 acres off base east of Runway 9/27 (the east-west runway) would have to be acquired to accommodate the runway expansion and navigational aids. Navigational easement agreements for 20 acres of off-base land north of Runway 18/36 (the north-south runway) would be required to

Proposed Airport Layout Plan-Proposed Action

Chanute AFB
Rantoul, Illinois

EXPLANATION

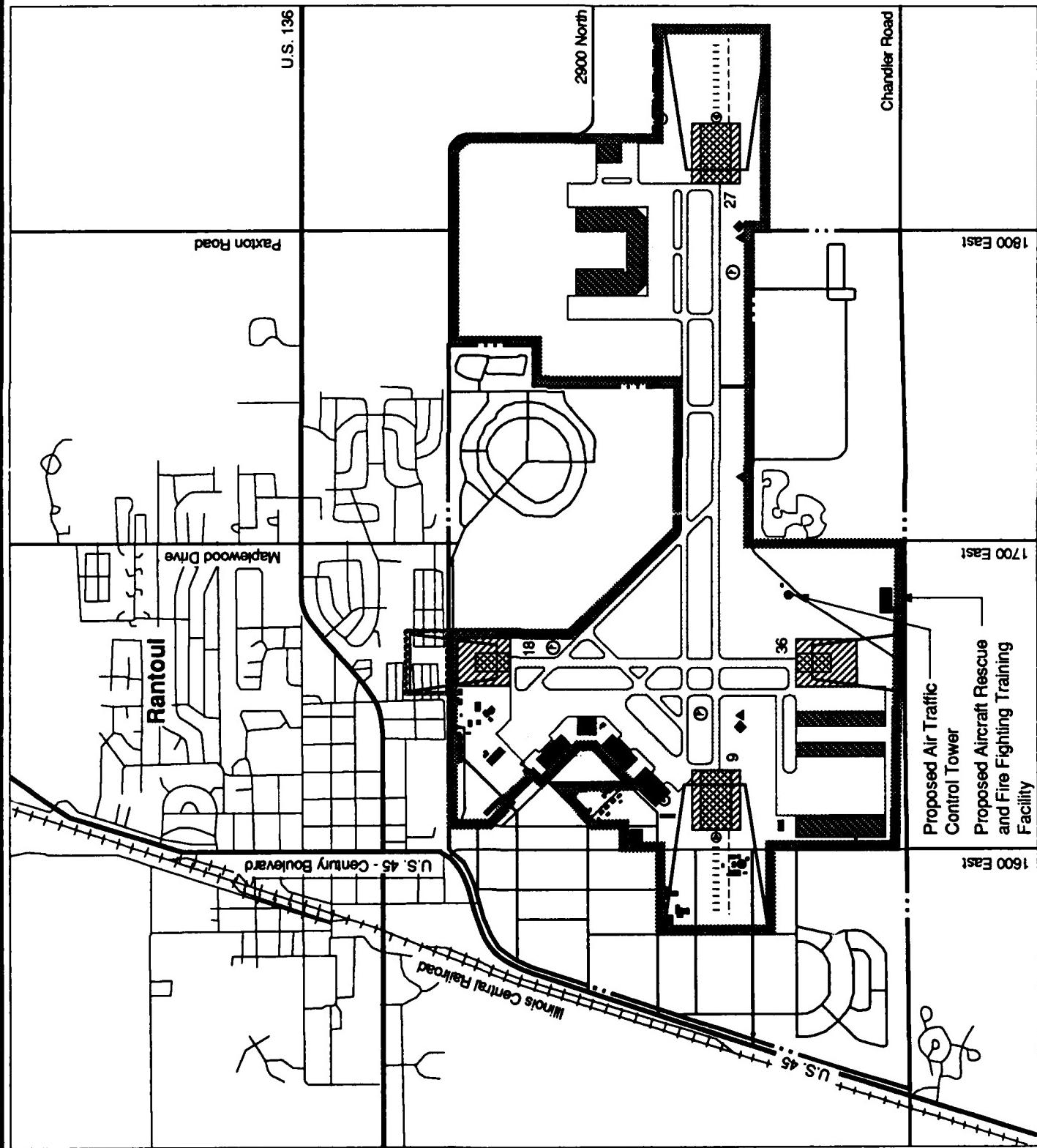
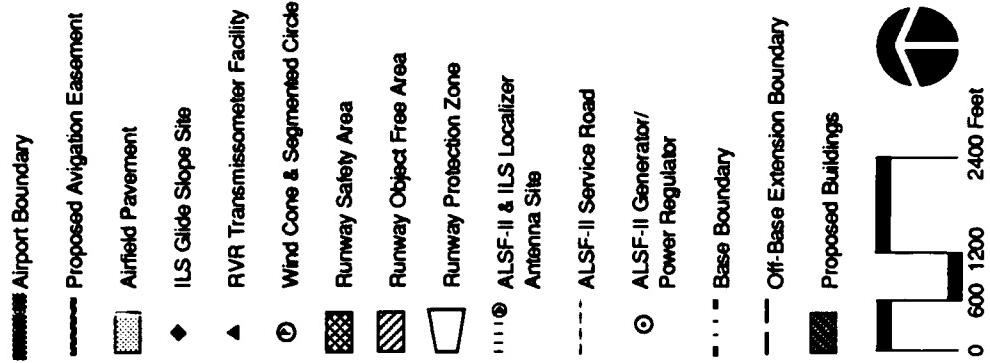


Figure 2.2-2

accommodate the runway protection zones. Another 2 acres would be required on base outside of the aviation-related land use zones (primarily in the public/recreation land use zone) to accommodate avigational easements for the runway protection zone at the end of Runway 18.

The following airfield improvements would be performed to meet the airfield requirements established in FAA Advisory Circular 530-13 for airports and to meet the requirements for aircraft maintenance and air cargo operations:

- Reconstruct, strengthen, and commission the existing 6,300-foot by 150-foot Runway 9/27. This action includes reconstruction of the existing pavement drainage system.
- Construct a 3,700-foot by 150-foot extension to Runway 9/27 to the east for a total runway dimension of 10,000 feet by 150 feet.
- Reconstruct, strengthen, and commission the southern 4,700-foot by 150-foot portion of Runway 18/36. Construct a 300-foot by 150-foot extension to the southern end of Runway 18/36 for a total runway dimension of 5,000 feet by 150 feet.
- Install High Intensity Runway Lights (HIRL) along the full length of Runway 9/27.
- Install Medium Intensity Runway Lights (MIRL) along the full length of Runway 18/36.
- Install Medium Intensity Taxiway Lights (MITL) along all proposed taxiways.
- Construct a new parallel and connecting taxiway for the full length of Runway 9/27. This action includes reconstruction and strengthening of the existing partial parallel taxiway.
- Construct a new parallel and connecting taxiway for the full length of Runway 18/36. This action includes reconstruction and strengthening of portions of the existing ramp to be used as a taxiway/taxilane.
- Construct a partial parallel taxiway for the proposed southwest quadrant.
- Reconstruct a connecting taxiway from Runway 9/27 to Runway 18/36 using the deactivated Runway 13/31 pavement.
- Remove pavement of the deactivated Runways 13/31 and 5/23 and a previous connecting taxiway.
- Develop a new northeast frontal area for use as an airline maintenance facility.
- Develop a new southwest frontal area for airline maintenance and education (post-2014).
- Install an approach light system with sequenced flashing lights (ALSF-II) on both ends of Runway 9/27.
- Install a precision Category II ILS including Localizer and Glide Slope facilities for both ends of Runway 9/27.
- Install an Airport Rotating Beacon, Runway End Identifier Lights (REIL), Apron Lighting, Visual Approach Descent Indicators (VADI), and Wind Cone and Segmented Circle.
- Install a Runway Visual Range (RVR) at the three positions for touch down, mid-point, and roll-out for both ends of Runway 9/27.
- Install an Air Traffic Control Tower (ATCT) (if identified as a requirement in an Airspace Determination Analysis).
- Construct an Aircraft Rescue and Fire Fighting facility to be dedicated to the airfield.

In addition to the above-mentioned airfield improvements, a runway compass locator outer marker would have to be constructed. This marker is a critical component of the ILS that is located 4 to 7 nautical miles from the threshold of the ILS runway (Runway 9/27). The outer marker is a low-powered transmitter that provides a nondirectional signal used for directional guidance to the initial segment of the ILS approach as well as a signal that activates aural and visual indicators in the aircraft for guidance in the final approach. The outer marker plot is approximately 180 by 60 feet, including access road and easement. The device consists of an antenna mounted on a wood pole with a prefabricated equipment shelter and battery standby power. All equipment is enclosed within a 7-foot chain link fence.

The exact site of the outer marker for the ILS runway under the Proposed Action has not yet been selected. It will likely be situated on private property, probably agricultural land. A real estate interest would be acquired for this land. The FAA/IDOT will conduct an environmental survey as part of the siting process to avoid potential environmental impacts resulting from construction of the marker.

Peak construction activity for airfield infrastructure is planned for the year 1992. Concrete rubble generated during airfield reconstruction would be recycled for use as subgrade for new runway construction. An on-site batch plant would provide concrete for the runway construction.

The airfield is estimated to be fully operational by 1994. Flight operations (take-off or landing) would primarily utilize Runway 9/27; Runway 18/36 would be used for general aviation operations only during adverse weather conditions. Table 2.2-2 shows the projected types of aircraft and the estimated frequency of each type of flight operation activity from 1994 to 2014.

Approximately 20 percent of the maintenance and air cargo flight operations would likely take place between 7 a.m. and 10 p.m., and 80 percent would likely occur between 10 p.m. and 7 a.m. Approximately 95 percent of general aviation operations would occur between 7 a.m. and 10 p.m. It is anticipated that approximately 20 employees would be needed to support the operational, maintenance, safety, and security-related airport requirements (Pan Am Management Systems, Inc., 1990).

The airfield would likely be conveyed to a municipal airport authority, who would manage the development and operations of the airfield in accordance with FAA and state aviation statutes.

2.2.2 Aviation Support

The aviation support land use zone covers 955 acres. This area includes approximately 1.8 million square feet of usable building space for aviation-support activities. The existing facilities include hangars,

Table 2.2-2. Projected Flight Operations - Proposed Action

Year	Operation	Fleet Mix	Annual Operations
1994	Major Maintenance	45% B-737-300 45% B-757-200 5% B-767-200 5% B-747-400	1,600
	Air Cargo	100% DC-9-30	730
	General Aviation	69% Single Engine 16% Multi Engine 8% Turbo Prop 7% Turbo Fan	6,940 1,600 730 730
			TOTAL
			12,330
1999	Major Maintenance	Same as 1994	2,600
	Air Cargo	100% B-727-200 (Re-engined Stage III)	730
	General Aviation	66% Single Engine 19% Multi Engine 8% Turbo Prop 7% Turbo Fan	9,900 2,850 1,200 1,095
			TOTAL
			18,375
2004	Major Maintenance	Same as 1994	2,600
	Air Cargo	100% B-757-200	730
	General Aviation	63% Single Engine 20% Multi Engine 9% Turbo Prop 8% Turbo Fan	10,710 3,400 1,520 1,460
			TOTAL
			20,420
2014	Major Maintenance	Same as 1994	2,600
	Air Cargo	Same as 2004	1,460
	General Aviation	61% Single Engine 21% Multi Engine 10% Turbo Prop 8% Turbo Fan	11,468 3,948 1,880 1,504
			TOTAL
			22,860

administrative/office buildings, aircraft maintenance/training classrooms and laboratories, warehouses, a fire training complex, jet-engine repair facilities, and meteorological/weather training facilities. These facilities could potentially support such land uses as commercial aircraft maintenance operations; technician certification training; civilian/military air rescue, fire fighting, and security training; emergency response; aviation training; minimal general aviation support; and small commercial air cargo operations. It is not anticipated that the aviation support areas would become a high-volume fixed base of operations for general aviation because there is a general aviation facility near Champaign-Urbana, approximately 20 miles south of Rantoul. Acquisition of 345 acres of off-base property adjacent to the east installation boundary would be required to accommodate the growth and development of future aviation maintenance facilities and ancillary facilities.

The aviation support area in the southwest portion of the base currently contains administrative buildings and mobile homes. The mobile homes will be removed by the owners prior to base closure. Additional development to support aviation activities may take place in this area after the year 2014. The southeast aviation support area currently contains several jet fuel training facilities as well as storage facilities (originally constructed as jet-engine test cells). It is anticipated that the jet fuel training facilities will be used for training (e.g., aviation training and technician training) within the next 20 years. The test cells and open areas in the southeast area are not anticipated to be utilized until after the year 2014.

Demolition and/or renovation of some existing facilities, as well as construction of new facilities, would likely be required to meet aviation support operational requirements. The existing firing range may have to be closed to be compatible with the aviation-related land uses. Some of these activities may begin prior to base closure.

New construction anticipated within 20 years of closure includes upgrading of on-base ancillary facilities, widening of existing roadways, and construction of a major aircraft maintenance facility in the off-base acquisition area east of the base. The new major maintenance facilities would include approximately 1.5 million square feet of building space to support maintenance operations and approximately 1.3 million square feet of vehicle parking facilities. The maintenance facility would likely be 110 feet high. A Hush House may also be constructed to perform engine run-ups required during maintenance operations. Construction of the maintenance facilities would likely be initiated before base closure and be completed soon after base closure.

Auxiliary parking and road upgrades would be needed to support the increased traffic generated by employees and students. Figure 2.2-1 shows the anticipated locations of road improvements. Local and state roadway improvements would include the following:

- Improve less than 1 mile of U.S. 136 to five lanes north of Township Road 1800 East (TR 234A)
- Improve Township Road 1800 East to provide access to the off-base extension area
- Improve Eagle Drive to a four-lane roadway
- Improve the north boundary road to provide access to the base and off-base property.

In addition, the following roadway closures and relocations would be performed:

- Close a portion of Old Main Road that traverses the runway object-free area for Runway 18/36
- Close and relocate a portion of Township Road 1800 East around the proposed off-base extension areas
- Close an east-west roadway that traverses the off-base extension area.

These roadway improvements and relocations would require establishment of rights-of-way (ROWs) and road expansion.

The aviation support land use area would accommodate a variety of uses within the existing and new building space. These uses would include maintenance operations, small air cargo operations, small general aviation-related and airport operations, aviation-related training activities (classrooms and laboratories), and administrative/office usage. Additional training and educational uses (i.e., aviation-related technical, air rescue, and emergency response training) would be developed in the aviation support land use zone. Assuming the maximum reuse of facilities, most of the building space would be fully operational within 5 years after closure.

In addition to the airfield, a portion of the aviation support land use zones would likely be conveyed to a municipal airport authority, who would manage the development and operations of the aviation support area in accordance with the FAA and the state's aviation and development statutes.

2.2.3 Institutional (Education/Training)

The education/training land use zone covers 161 acres. This area includes approximately 2 million square feet of usable building space to support education/training land uses. The existing facilities include classrooms and laboratories, administrative and office space, several commercial facilities, and dormitories. These facilities could potentially support a variety of education/training land uses, including the following:

- Higher education campus
- Pilot training
- Automotive training
- General education
- Weather training.

Some existing facilities would likely have to be renovated or demolished to support the education/training land uses. Most of the existing facilities are either presently used for student training or could be converted to institutional uses with minor alterations. Demolition and renovations would likely be phased over several years to meet user demands.

Because of the density and layout of existing facilities in this land use category, no new facility construction is anticipated. In addition, it is likely that sufficient building space exists to meet future educational and training classroom demands within 20 years after base closure. Auxiliary parking may be needed to support the increased parking requirements and traffic generated by employees and students.

The existing usable building space could potentially support a variety of educational and training land uses, ranging from classroom education to vocational and light industrial training. Most building space would be fully operational within 10 years of base closure.

2.2.4 Industrial

The industrial land use zone covers 33 acres of existing open land. The only development in this area within 20 years after closure that is considered under the Proposed Action is a baffled firing range to support education/training and aviation activities (i.e., police training, airport security training). It is likely that small arms ordnance would be stored at this facility. Construction of the new baffled firing range may be completed soon after base closure, and operations could begin as early as 1994.

2.2.5 Institutional (Medical)

The medical land use zone covers 40 acres. This area includes a hospital, dental clinic, and a daycare center. The land area could potentially support civilian life-care, child care, and medical research/training facilities. The existing hospital and child care facility are in good condition and are capable of supporting civilian use with minimal reconstruction or renovation. No new construction is anticipated.

2.2.6 Commercial

The proposed commercial land use zone covers 34 acres. This area includes approximately 41,000 square feet of usable building space for commercial use. The usable existing facilities include a cold storage warehouse, a gas station, and a computer center. The area also includes an electric substation and two water towers that serve the base. A variety of uses could be developed to accommodate the service/retail and office needs of the large number of people

projected to be employed in the area. These uses could include banks, dry cleaners, restaurants, cold storage, personal services, and offices.

Demolition and new construction would likely be required in this land use zone to meet commercial use demands. Existing buildings that could not support commercial use would be demolished as needed within 5 years after base closure. The area could support up to approximately 138,000 square feet of new facility construction for retail/services (e.g., restaurant, banks) and 266,000 square feet of associated parking. The construction would take place as needed over the 10 years after closure.

The commercial land use zone would support a variety of land uses within the 41,000 square feet of existing building space and 138,000 square feet of new building space. Assuming maximum reuse, most of the existing buildings would be fully operational within 5 years after closure. The 138,000 square feet of new building space would be fully utilized within 15 years after closure.

2.2.7 Recreation/Open Space

The proposed recreation/open space land use zone covers 405 acres. This area includes approximately 118,000 square feet of usable building space for recreation. The existing facilities include a youth center, gymnasium, arts and crafts center, chapel, and other recreational support facilities. The land use zone also includes the parade grounds, the static aircraft display area, the golf course, and Heritage Lake.

Under the Proposed Action, the existing open spaces and recreational areas would be retained for civilian use. These recreation/open space areas would provide active and passive recreation use for the community and tourists to Rantoul. The open spaces are planned to provide a buffer zone between the various land uses, where necessary.

It is anticipated that minor renovation would be required to convert the existing facilities to civilian use. Construction of new support facilities may be required for the development of an Air Museum and potential expansion of the outdoor static aircraft display area. Construction is estimated to be completed within 5 years of closure; renovation and demolition is anticipated to be completed within 20 years of base closure.

The Department of the Interior will evaluate the inclusion of several portions of the recreation land zones in public recreational areas and open areas. The boundaries have not been finalized, but the locations will not affect the environmental impact analysis.

2.2.8 Residential

The proposed residential zones include the three existing on-base housing areas, apartments and hotels, the Officer's Club, non-residential storage facilities, and the swimming pool. This area includes 1,288 housing units and approximately 270 hotel/apartment units. The existing housing units could provide housing for new or existing residents in Rantoul, or could provide housing for low-income residents or for the homeless.

It is anticipated that some alterations to existing housing units may be required in order to meet current housing market needs. In addition, some non-residential structures that are within these areas but are not planned for reuse may have to be demolished. It is assumed that demolition or alteration of these structures would be completed within 10 years after closure.

2.2.9 Employment and Population

The Proposed Action would generate both direct jobs (airline maintenance, educational/training, and medical) on base and indirect jobs (retail/commercial, recreational, food services, etc.) in Champaign and Ford counties. Approximately 6,050 direct jobs and 6,000 indirect jobs would likely be generated in Champaign and Ford counties.

Employment increases would be associated with population increases. The population in the Village of Rantoul is expected to increase by 5,790 persons (57 percent) over the closure baseline by the year 2014. In addition, about 3,530 students would enter into the region and reside in existing dormitories or family housing.

2.2.10 Traffic Generation

Based on the employment and population projections, average daily trips to and from the base property would total about 56,590 by the year 2014.

2.2.11 Utility Requirements

By 2014, the projected activities and population increases in the Village of Rantoul would generate the following increases in utility demands over closure baseline conditions:

- Water - increase of 2.6 million gallons per day (MGD)
- Wastewater - increase of 1.3 MGD
- Solid Waste - increase of 100 cubic yards per day
- Electricity - increase of 265 megawatt-hours (MWH) per day
- Natural Gas - increase of 13,925 therms per day
- Coal - increase of 80 tons per day.

Utility improvements would be required to provide adequate service to proposed new facilities. A brief description of required utility improvements associated with

the Proposed Action is provided below for each of the systems studied in this analysis.

Water Supply. The Rantoul and Chanute AFB supply systems are interconnected through existing pipelines. The proposed 1.5-million-square-foot maintenance facility would require a new connection to the existing system. The closest points of the existing main to the proposed site are at Chanute AFB's east gate at the corner of Maplewood Drive and Old Main Road, and on Grove Avenue, just south of the Rantoul Wastewater Treatment Plant (WWTP). Minor redesign and reconfiguration of the existing on-base system would likely be required to accommodate particular user-related demands.

Wastewater. It is estimated that wastewater flows from the base under the Proposed Action would decline to a minimum of about 1.3 MGD in 1994 as the base closes and construction decreases, then gradually increase to an average of approximately 1.7 MGD by the year 2014. Some temporary modifications in the collection system as well as increased maintenance may be required during the period of reduced flows. The proposed maintenance facility in the aviation support area would require a new connection to the existing collection system. As with the water supply system, some redesign or reconfiguration of the existing on-base wastewater collection system would likely be required to accommodate particular user-related demands.

Solid Waste. No major changes associated with the planned solid waste collection and disposal system would be anticipated under the Proposed Action.

Energy. The proposed maintenance facility would require new connections to the existing electric and natural gas distribution systems. Some redesign or reconfiguration of various components of the existing power and space-heating/cooling and water-heating systems serving Chanute AFB would likely be required to accommodate particular user-related demands.

2.3 DESCRIPTION OF ALTERNATIVES

2.3.1 Minor Aircraft Maintenance Operations Alternative

This alternative is similar to the Proposed Action in that it combines similar types of aviation and non-aviation land uses within the base properties (Figure 2.3-1). The difference between this alternative and the Proposed Action is in the size of the aircraft maintenance operations. It is estimated that the Minor Aircraft Maintenance Operations Alternative will require only up to 2,000 employees to operate within existing on-base facilities in the aviation support land use zone. The size of this minor maintenance operation would result in lower air traffic, land acquisition requirements, and population impacts on the base property than under to the Proposed Action; it would also relieve the support service demands on the community. The lower demands would allow the support requirements of

Minor Aircraft Maintenance Operations Concept Plan

Chanute AFB
Rantoul, Illinois

EXPLANATION

- ① Airfield
 - ② Aviation Support
 - ③ Institutional (Educational/Training)
 - ④ Industrial
 - ⑤ Institutional (Medical)
 - ⑥ Commercial
 - ⑦ Public/Recreation
 - ⑧ Residential
- Base Boundary
 - Off Base Avigational Easement
 - Road Improvements

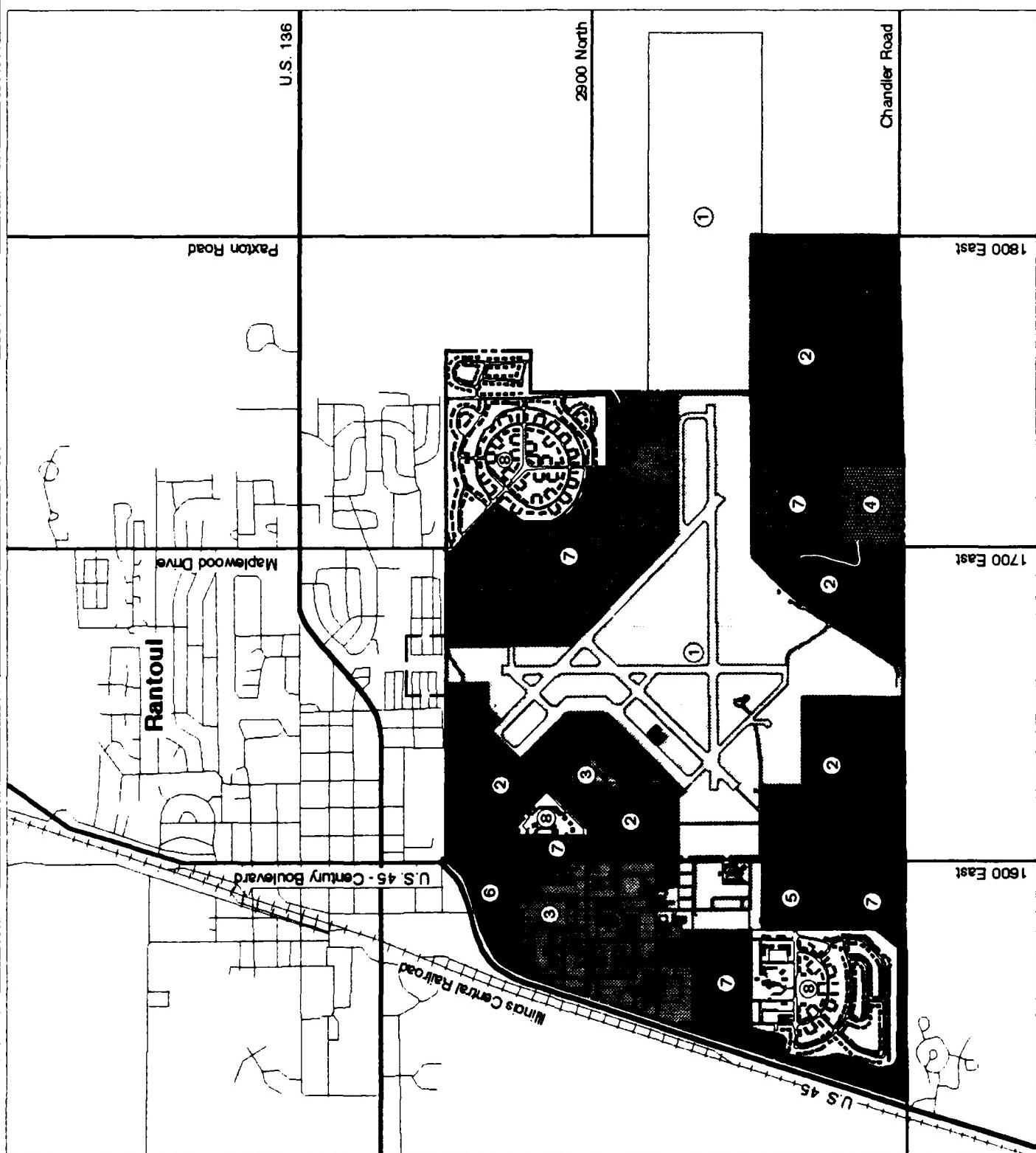
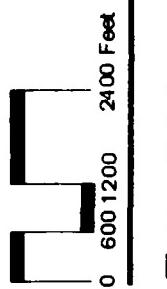


Figure 2.3-1

the proposed reuse development to be accommodated almost entirely within the base property.

The only land use activities and land use configurations that would be different from the Proposed Action are the airfield and aviation support land use categories; these are described in the following subsections. The remaining land use categories are as described for the Proposed Action.

Major components of this alternative reuse concept plan include an airfield (as presented for the Proposed Action); aviation support areas with capabilities to support minor aircraft maintenance operations, small air cargo operations, and light general aviation operations; education and training areas; medical; industrial; commercial; recreation; and residential areas. The total acreage of each land use category is shown in Table 2.3-1.

Table 2.3-1. Land Use Acreage - Minor Aircraft Maintenance Operations Alternative

	Acreage
Base Property	
Airfield	554
Aviation Support	609
Institutional (Education/Training)	161
Industrial	33
Institutional (Medical)	40
Commercial	34
Recreation	405
Residential	285
Subtotal	2,121
Off-Base Property	
Airfield - acquisition	231
Airfield - navigational easements	20
Subtotal	251
TOTAL	2,372

As part of the airport-related activities, a proposed airport layout plan would be developed. This plan, which is required for federally funded public use airports, must be approved by IDOT, under the State Block Grant Program. Although an airport layout plan has not been developed for this alternative, it is assumed that the airfield layout would be similar to that developed for the Proposed Action. The potential airfield configuration is shown on Figure 2.3-2. The airport boundary as defined in future airport layout plans may differ from the aviation-related boundaries as shown in Figure 2.3-1. The airport boundary in the airport layout plan would include land with direct aeronautical-related uses and surrounding lands of sufficient size to produce revenue capable of keeping the airport financially self-sustaining. The airport boundary has yet to be defined, but the location of the boundary will not affect the environmental impact analysis.

**Proposed Airfield -
Minor Aircraft
Maintenance
Operations
Alternative**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

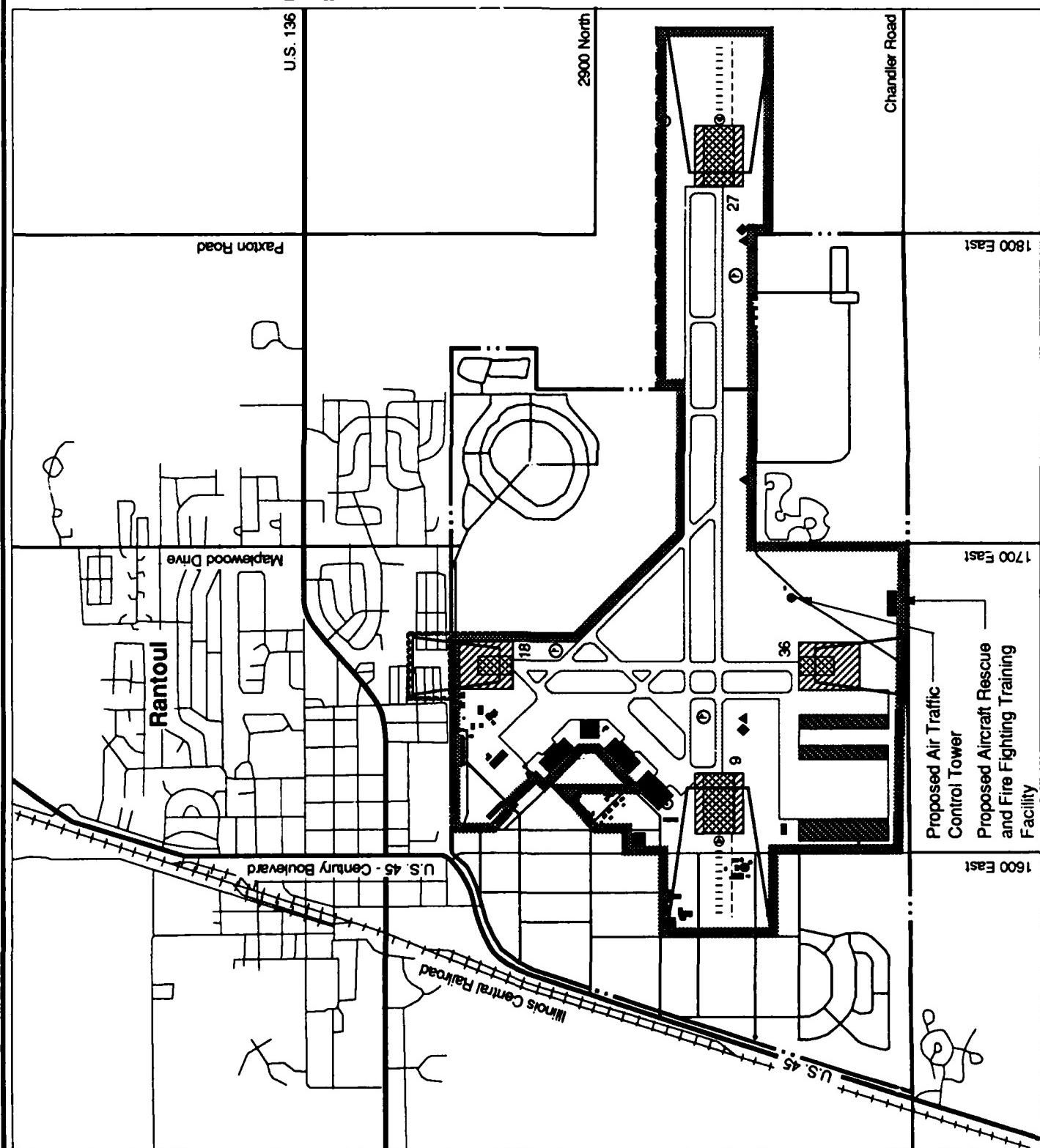
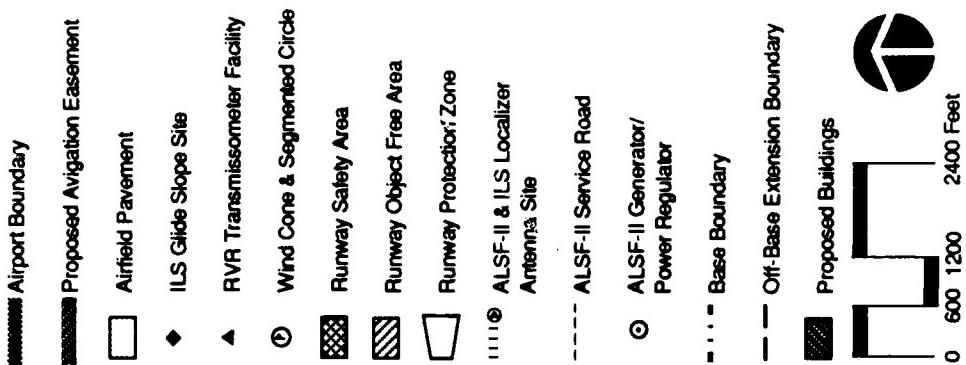


Figure 2.3-2

2.3.1.1 Airfield. This land use zone includes a total area of 785 acres. The airfield includes the runways, taxiways, parking aprons, and navigational aids (including outer markers) required for general aviation purposes. The airfield may be used by a variety of aircraft to support several aviation-related operations such as minor aircraft maintenance operations, small air cargo operations, and minor general aviation operations.

Real estate interests for 231 acres of adjacent off-base land will have to be acquired to accommodate the runway expansion and navigational aids. Avigational easements to accommodate runway protection zones will be required both on and off base, totaling 22 acres.

Peak construction activity for airfield infrastructure is planned for the year 1992. The same airfield improvements described for the Proposed Action would be required for the Minor Aircraft Maintenance Operation Alternative. As in the Proposed Action, MIRL, HIRL, MITL, VADI, an Airport Rotating Beacon, REIL, and Apron Lighting visual guidance systems would be installed. Instead of the ALSF-II included in the Proposed Action, however, this alternative calls for installation of a Medium Intensity Approach Light System with Runway Alignment Indicator Lights (MALSR) on both ends of Runway 9/27.

The airfield is scheduled to be fully operational by 1994. Flight operations would primarily utilize Runway 9/27; Runway 18/36 would be used only during adverse weather conditions. Table 2.3-2 shows the projected types of aircraft and the estimated frequency of each type of flight operations activity from 1994 to 2014. Approximately 20 percent of the maintenance and air cargo flight operations would likely occur between 7 a.m. and 10 p.m. and 80 percent would likely occur between 10 p.m. and 7 a.m. Approximately 95 percent of the general aviation operations would occur between 7 a.m. and 10 p.m.

It is anticipated that about 20 employees would be required to support the operational, maintenance, safety, and security-related airport requirements. The airfield would likely be conveyed to a municipal airport authority, who would manage the development and operations of the airfield in accordance with the FAA and state aviation statutes.

2.3.1.2 Aviation Support. The aviation support land use zone covers 609 acres. This area includes approximately 1.8 million square feet of usable building space for aviation-support land activities. The existing facilities include hangars, administrative/office buildings, aircraft maintenance/training classrooms and laboratories, warehouses, a fire training complex, jet-engine repair facilities, and meteorological/weather training facilities. These facilities could potentially support such land uses as minor aircraft maintenance operations; technician certification training; civilian/military air rescue, fire fighting, and security training; emergency response aviation training; minimal general aviation support; and

Table 2.3-2. Projected Flight Operations - Minor Aircraft Maintenance Operations Alternative

Year	Operation	Fleet Mix	Annual Operations
1994	Maintenance	45% B-737-300 45% B-757-200 5% B-767-200 5% B-747-400	300
	Air Cargo	100% DC-9-30	730
	General Aviation	69% Single Engine 16% Multi Engine 8% Turbo Prop 7% Turbo Fan	6,940 1,600 730 730
			TOTAL
			11,030
1999	Maintenance	Same as 1994	500
	Air Cargo	100% B-727-200 (Re-engined Stage III)	730
	General Aviation	66% Single Engine 19% Multi Engine 8% Turbo Prop 7% Turbo Fan	9,900 2,850 1,200 1,095
			TOTAL
			16,275
2004	Maintenance	Same as 1994	600
	Air Cargo	100% B-757-200	730
	General Aviation	63% Single Engine 20% Multi Engine 9% Turbo Prop 8% Turbo Fan	10,710 3,400 1,520 1,460
			TOTAL
			18,420
2014	Maintenance	Same as 1994	700
	Air Cargo	100% B-757-200	1,460
	General Aviation	61% Single Engine 21% Multi Engine 10% Turbo Prop 8% Turbo Fan	11,468 3,948 1,880 1,504
			TOTAL
			20,960

small commercial air cargo operations. It is not anticipated that the aviation support areas would become a high-volume fixed base of operations for general aviation because there is a general aviation facility near Champaign-Urbana, approximately 20 miles south of Rantoul.

Some existing facilities would have to be demolished and/or renovated in order to accommodate civilian aviation support-related uses. Demolition and renovation of some facilities would likely begin prior to closure in 1993 and continue as needed. Auxiliary parking lots would be constructed to support the aviation support-related land uses as well as the non-aviation-related uses.

The only road upgrade included in this alternative is the Eagle Drive expansion as described in the Proposed Action (see Section 2.2.2). New construction in the existing and future vacant land in the southeast and southwest areas may be initiated after the year 2014. A Hush House will not be constructed.

The aviation support land use area would support a variety of land uses within the existing 1.8 million square feet of building space. These uses include maintenance operations, small air cargo operations, small general aviation-related and airport operations, aviation-related training activities, air rescue and emergency response training, and administrative/ office activities. Assuming the maximum reuse of facilities, most of the building space would be fully operational within 5 years after closure.

In addition to the airfield, a portion of aviation support land use zones would likely be disposed to a municipal airport authority, who would manage the development and operations of the aviation support area in accordance with the FAA and the state's aviation and development statutes.

2.3.1.3 Employment and Population. The Minor Aircraft Maintenance Operations Alternative would generate both direct jobs on base and indirect jobs in Champaign and Ford counties. Approximately 1,880 new direct jobs and 1,400 indirect jobs would likely be generated by the year 2014.

Employment increases would be associated with population increases. The population in the Village of Rantoul is expected to increase by 1,800 (18 percent) over the closure baseline by the year 2014. In addition, about 3,530 students would enter into the region and reside in existing dormitories and family housing.

2.3.1.4 Traffic Generation. Employment and population projections suggest that average daily trips to and from the base property would total about 37,445 by the year 2014.

2.3.1.5 Utility Requirements. The project-related activities and population increases in the Village of Rantoul would generate the following increases in utility demands over the closure baseline by the year 2014:

- Water - increase of 1.5 MGD
- Wastewater - increase of 0.7 MGD
- Solid Waste - increase of 50 cubic yards per day
- Electricity - increase of 140 MWH per day
- Natural gas - increase of 6,400 therms per day
- Coal - increase of 40 tons per day.

A brief description of required utility improvements associated with this alternative is provided below for each of the systems studied in this analysis.

Water Supply. The Rantoul and Chanute AFB supply systems are interconnected through existing pipelines. Minor redesign and reconfiguration of the existing on-base system would likely be required to accommodate particular user-related demands.

Wastewater. Flows from the base will drop to a minimum of 1 MGD in 1994, then increase to 1.4 MGD in 2014. Some temporary modifications in the collection system as well as increased maintenance may be required during the period of reduced flows. As with the water supply system, some redesign and reconfiguration of the existing on-base wastewater collection system would likely be required to accommodate particular user-related demands.

Solid Waste. No major changes associated with the planned solid waste collection and disposal system would be anticipated under this alternative.

Energy. Various components of the existing power and space- and water-heating systems serving Chanute AFB would likely have to be redesigned or reconfigured slightly to accommodate particular user-related demands.

2.3.2 Non-Aviation Alternative

This alternative includes only non-aviation land uses (Figure 2.3-3). The focal point of the Non-Aviation Alternative is a large industrial land use zone and an educational/training land use zone. The existing airfield will remain inactive and the open areas around the airfield and in the southern portion of the base will be used for agricultural purposes. No off-base property will be acquired for this alternative. Components of this alternative include industrial areas with capabilities to support storage and truck maintenance activities; education and training areas; agricultural areas; medical; commercial; recreation; and residential areas. The total acreage of each land use category is shown in Table 2.3-3.

2.3.2.1 Institutional (Education/Training). The education/training land use zone covers 378 acres. The existing facilities include classrooms and

Non-Aviation Concept Plan

Chanute AFB Rantoul, Illinois

EXPLANATION

- | | |
|----------------------------|--|
| <input type="checkbox"/> ① | Not Applicable |
| <input type="checkbox"/> ② | Not Applicable |
| <input type="checkbox"/> ③ | Institutional (Educational/
Training) |
| <input type="checkbox"/> ④ | Industrial |
| <input type="checkbox"/> ⑤ | Institutional (Medical) |
| <input type="checkbox"/> ⑥ | Commercial |
| <input type="checkbox"/> ⑦ | Public/Recreation |
| <input type="checkbox"/> ⑧ | Residential |
| <input type="checkbox"/> ⑨ | Agriculture |
| ----- Base Boundary | |

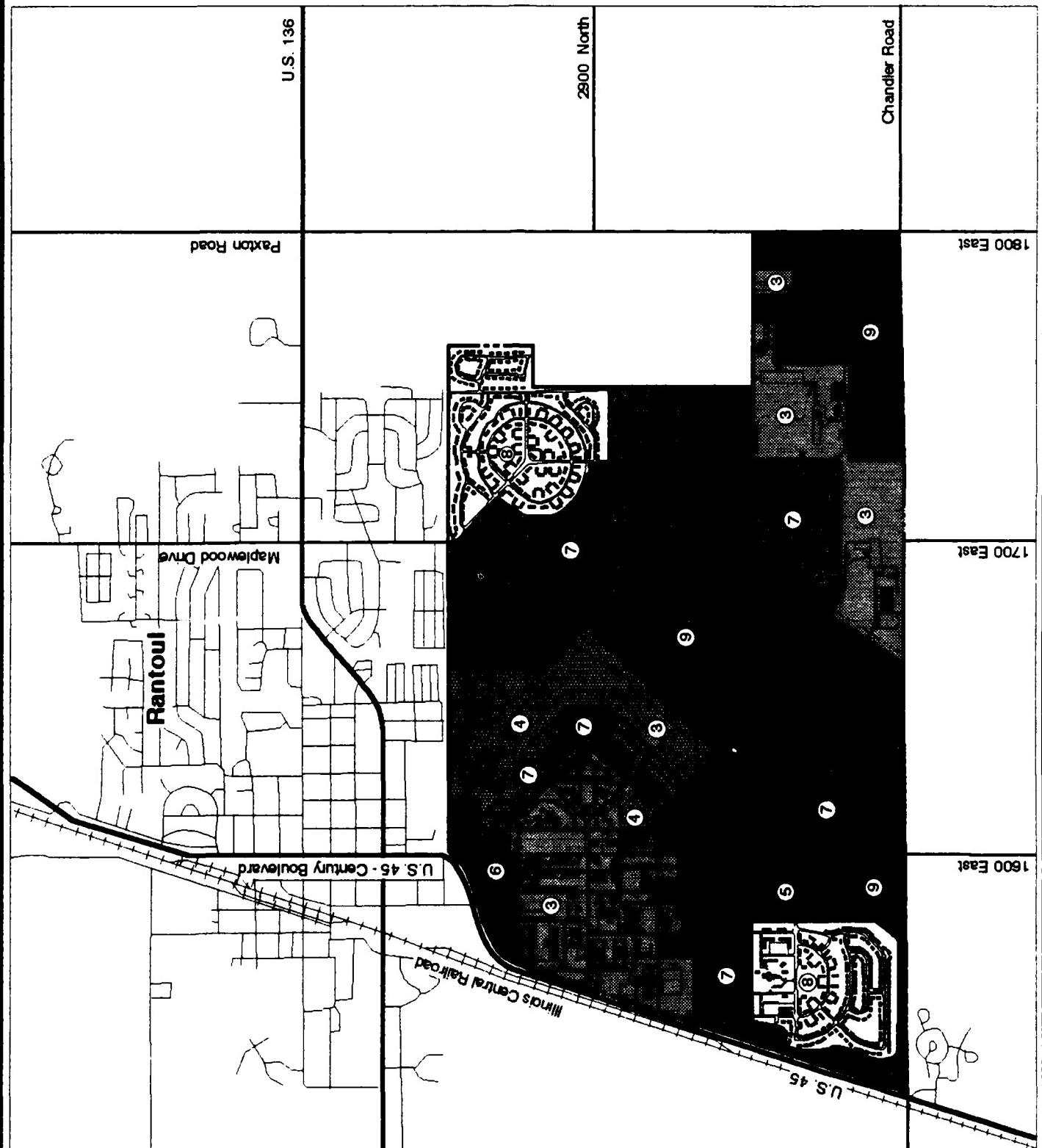
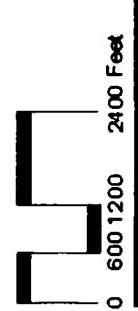


Figure 2.3-3

Table 2.3-3. Land Use Acreage - Non-Aviation Alternative

Base Property	Acreage
Institutional (Education/Training)	378
Industrial	185
Institutional (Medical)	45
Commercial	40
Recreation	473
Residential	292
Agriculture	708
TOTAL	2,121

laboratories, administrative/office space, a fire training complex, a weather training complex, and several commercial facilities, dormitories, and apartments. These facilities could potentially support a variety of education/training land uses, including:

- Civilian/military air rescue, fire fighting, and security training
- Vocational training (police, truck driving, fuels, weather
- General education.

Demolition or renovation of some existing facilities would likely be required to support the education/training land uses. Most of the existing facilities are either presently used for student training or could be converted to institutional uses with alterations. These demolition and renovation activities would likely be phased to meet user demands beyond the year 2014. No new facility construction is anticipated, but auxiliary parking may be needed to support the demands of the employees and students.

The existing usable building space could potentially support a variety of educational/training land uses ranging from classroom education to vocational and light industrial training. Approximately 80 percent of the building space would be operational by the year 2014.

2.3.2.2 Industrial. The industrial land use zone covers 185 acres. The existing facilities include hangars, administrative/office buildings, warehouses, and vehicle maintenance facilities. These facilities could be used for storage or to support light industry (e.g., truck maintenance).

Demolition and renovation of some existing facilities would likely be required to meet industrial user demands for open space and parking. No new facility construction is anticipated. Demolition and renovations would likely be phased

beyond the year 2014. Approximately 50 percent of the building space would be occupied by 20 years after base closure.

2.3.2.3 Institutional (Medical). The description of the medical land use zone for this alternative would be the same as that for the Proposed Action. However, the activity would be of smaller scale because of the smaller population projected for this alternative.

2.3.2.4 Commercial. The proposed commercial land use zone covers 40 acres. This area includes approximately 41,000 square feet of usable building space. The existing facilities include a cold storage warehouse, a gas station, and a computer center. The area also includes an electric substation and two water towers that connect to the base utility distribution system. It is not anticipated that new construction would take place in the commercial zone within 20 years of base closure.

2.3.2.5 Public/Recreation. The public/recreation land use zone covers 473 acres. The existing facilities include a fire station, steam plant, a hangar, youth center, gymnasium, arts and crafts center, and other recreational support facilities. The land use zone also includes the parade grounds, static aircraft display area, the golf course, lighted baseball field, and Heritage Lake. These facilities could be used for similar civilian activities.

Renovation and reconstruction will be required to convert the hangar facility to an Air Museum. Reconstruction and renovation may also be required to convert other existing facilities to civilian use (e.g., fire station).

The open/recreation areas may be fully operational within 20 years of base closure. The Department of the Interior will evaluate the inclusion of several portions of the recreation land zones in public recreational areas and open areas. The boundaries have not been finalized, but their locations will not affect the environmental impact analysis.

2.3.2.6 Residential. The proposed residential zones include two on-base housing areas (1,253 units) and apartments (270 units). These units could provide housing for students and faculty, as well as for low-income residents or the homeless.

Some alteration of existing housing units may be required in order to meet current housing market needs. Demolition of some nonresidential structures that are in the area but are not planned for reuse may also be required. Approximately 300 units would likely be occupied within 20 years of base closure. Vacant residential units would be maintained by the new owner.

2.3.2.7 Agricultural. The agricultural land use zone covers 708 acres. Of this area, 300 acres would be leased for agriculture at the time of base closure. The

remaining vacant area would be converted to agricultural uses within years of base closure. Crops typical of the area include soybeans and corn. Field tiles may be required to provide adequate drainage of the land. The airfield pavement would be left in place and would provide auxiliary parking for other users.

2.3.2.8 Employment and Population. The Non-Aviation Alternative would generate approximately 1,230 new direct jobs on base and 150 indirect jobs in Champaign and Ford counties by the year 2014.

Projected employment would generate population changes in the Village of Rantoul. Population in the Village of Rantoul is expected to increase to 1,170 persons (12 percent) over the closure baseline by the year 2014. In addition, about 2,480 students would enter the region and reside in dormitories and family housing.

2.3.2.9 Traffic Generation. Employment and population projections suggest that average daily trips to and from the base property would total about 15,850 by the year 2014.

2.3.2.10 Utility Requirements. The project-related population increases in the Village of Rantoul would generate the following increases in utility demands by the year 2014 when compared to closure baseline conditions:

- Water - increase of 0.9 MGD
- Wastewater - increase of 0.4 MGD
- Solid Waste - increase of 30 cubic yard per day
- Electricity - increase of 85 MWH per day
- Natural gas - increase of 3,850 therms per day
- Coal - increase of 20 tons per day.

A brief description of required utility improvements associated with this alternative is provided below for each of the systems studied in this analysis.

Water Supply. The Rantoul and Chanute AFB supply systems are interconnected through existing pipelines. Minor redesign and reconfiguration of the existing on-base system would likely be required to accommodate particular user-related demands.

Wastewater. Wastewater flows from the base would drop to a minimum of 0.9 MGD in 1994, then increase to 1.2 MGD in 2014. Some temporary modifications in the collection system as well as increased maintenance may be required during the period of reduced flows. As with the water supply system, some redesign and reconfiguration of the existing on-base wastewater collection system would likely be required to accommodate particular user-related demands.

Solid Waste. No major changes associated with the existing solid waste collection and disposal system would be anticipated under this alternative.

Energy. Various components of the existing power and space- and water-heating systems serving Chanute AFB would likely have to be redesigned or reconfigured to accommodate particular user-related demands.

2.3.3 No-Action Alternative

The No-Action Alternative under the disposal and reuse for Chanute AFB would result in the U.S. Government retaining ownership of the property after closure. The property would not be put to further use. The base would be preserved, i.e., placed in a condition intended to limit deterioration and ensure public safety. A caretaker would be provided to ensure base security and maintain the grounds and physical assets, including the existing utilities and structures. No military activities/missions would be performed on the property.

The future land uses and levels of maintenance would be as follows:

- Maintain structures in mothballed condition. This would involve disconnecting or draining some utility lines and securing facilities.
- Maintain and protect on-base wetlands.
- Isolate or deactivate utility distribution lines on base.
- Provide limited maintenance of roads to ensure access.
- Provide limited grounds maintenance of open areas. This would primarily consist of infrequent cutting to eliminate fire, health, and safety hazards.
- Maintain golf course in such a manner as to facilitate economical resumption of use.
- Maintain existing agricultural leases.

A disposal management team has been established at Chanute AFB. The responsibilities of this team include coordinating closure activities, establishing a caretaker force to maintain Air Force properties after closure, and serving as the Air Force liaison supporting community reuse. For the purposes of environmental analysis, it was assumed that this team would comprise approximately 50 people at the time of closure.

The Rantoul and Chanute AFB water supply systems would remain interconnected through existing pipelines for emergency uses. Numerous nonessential water lines would be drained and completely disconnected from the water supply system. Various components of the existing on-base wastewater collection system on Chanute AFB may have to be retrofitted because flow from the base to the Rantoul WWTP would be reduced. A higher degree of maintenance than is normally necessary may also be required. Solid waste collection from the base would likely be reduced to a negligible level under this alternative. The existing power and space-heating systems serving Chanute AFB would likely be utilized at substantially reduced levels while the base is in

caretaker status. Electrical power would be required for security lighting and other essential systems, and natural gas and coal would probably be required during winter months to maintain minimal space heating in mothballed facilities.

Natural gas-heating requirements are expected to be approximately 20 percent of historic demand. Coal requirements are anticipated to be of a similar magnitude.

2.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Several other possible reuse alternatives were considered but eliminated from further study. The Air Force's selection of alternatives to evaluate was based on studies of available markets, market trends, use of existing facilities, and community profiles. After weighing the attributes of each alternative, it was determined that the Proposed Action and alternatives presented the most reasonable and economically feasible reuse options for the Chanute AFB property.

2.4.1 General Aviation Operations

A major fixed base for general aviation operations was considered and rejected as unreasonable because facilities to meet these needs are in place and operating at Frasca Field, approximately 11 miles south of Chanute AFB.

2.4.2 Primary Commercial Aviation Operations

Major commercial passenger operations were considered and rejected as unreasonable because facilities that meet this need are in place and operating at Willard Airport, 20 miles south of Rantoul.

2.4.3 Vacant Land Concept

The alternative of removing existing facilities and infrastructure on the Chanute AFB property to create complete land use and zoning flexibility was considered but eliminated because of the high costs required to remove and dispose of all land use-specific facilities and infrastructure. In addition, it appears that the existing facilities can be converted for civilian use.

2.5 OTHER FUTURE ACTIONS IN THE REGION

The only reasonably foreseeable future action that would have a cumulative impact to the base disposal and reuse action is the disposal of Chapman Court Military Family Housing Area in Rantoul (Figure 2.5-1). Although Chapman Court is part of the existing Chanute AFB property, the disposal decision is being treated separately because the property is currently excess and surplus to the Federal Government and is geographically separate from the base. The disposal

Chapman Court

Chanute AFB
Rantoul, Illinois

EXPLANATION

— Base Boundary

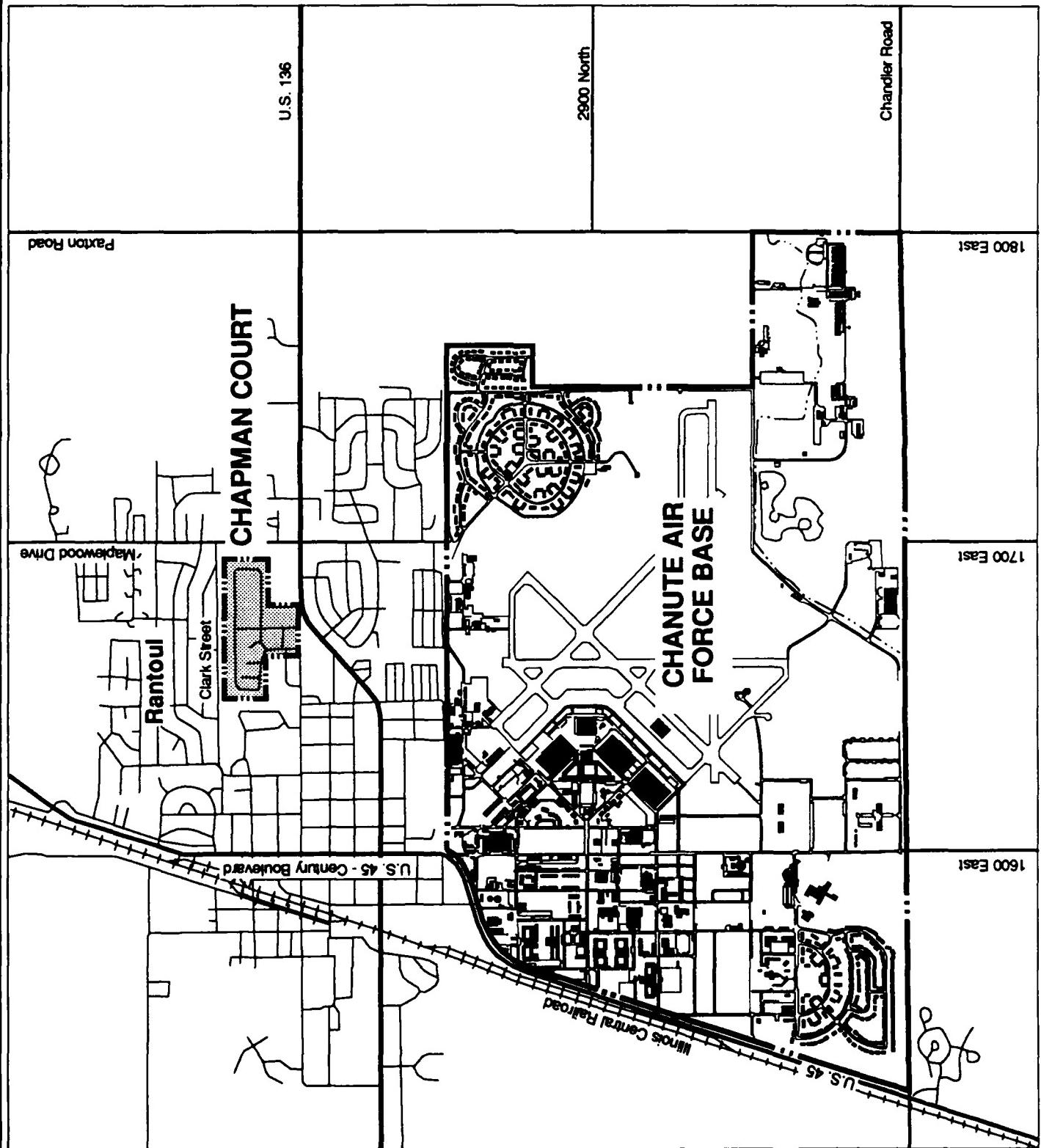
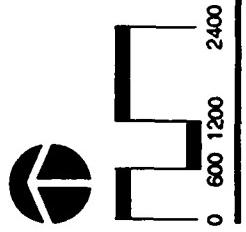


Figure 2.5-1

of Chapman Court will not prejudice future reuse plans for Chanute AFB or predispose any disposal or reuse decision.

The proposed action is to dispose of Chapman Court in a manner that will facilitate redevelopment of the property for mixed uses. This action would result in demolition of the existing housing structures and redevelopment of the property for a combination of uses including residential, retail, light industrial, and recreational.

2.6 COMPARISON OF ENVIRONMENTAL IMPACTS

A comparison of reuse activities in relation to the closure baseline is provided in Table 2.6-1. These activities have been analyzed to determine their effects on the environment. Impacts to the environment are described briefly in the summary and discussed in detail in Chapter 4. A summary comparison of the influencing factors and environmental impacts on each biophysical resource affected by the Proposed Action and alternatives is presented in Tables 2.6-2 and 2.6-3.

Table 2.6-1. Reuse Activities - Change from Closure Baseline ^(a)

Activity	Proposed Action	Minor Aircraft Maintenance Operations	Non-Aviation	No-Action
Land Acquisition	576 acres	231 acres	0	0
Avigational Easement				
- On base	2 acres	2 acres	0	0
- Off base	20 acres	20 acres	0	0
Ground Disturbance (Facilities/Airfield)	218 acres	92 acres	0	0
Direct Employment	6,050 increase	1,880 increase	1,230 increase	0
Indirect Employment	6,000 increase	1,400 increase	150 increase	
Rantoul Population ^(b)	5,790 increase	1,800 increase	1,670 increase	0
Traffic (Trips Generated)	56,590 increase	37,445 increase	15,850 increase	0
Utility Demand				
- Water	2.6 million gpd	1.5 million gpd	0.9 million gpd	0
- Wastewater	2.2 million gpd	1.2 million gpd	0.7 million gpd	0
- Solid Waste	100 cubic yards/day	50 cubic yards/day	30 cubic yards/day	0
- Electricity	265 MWH/day	140 MWH/day	85 MWH/day	0
- Gas	13,925 therms/day	6,400 therms/day	3,850 therms/day	0
- Coal	80 tons/day	40 tons/day	20 tons/day	0
Flight Operations (Annual)	22,860	20,960	0	0

(a) Descriptions compare conditions projected at the year 2014 to closure baseline conditions in 1993.

(b) Additionally, approximately 3,530 college and vocational/technical students would likely immigrate to the region under the Proposed Action and Minor Aircraft Maintenance Operations Alternative, and approximately 2,480 college and vocational/technical students would immigrate to the region under the Non-Aviation Alternative. These students would likely reside in existing base dormitories or family housing.

Table 2.6-2. Summary of Influencing Factors for Reuse of Chanute AFB in the Year 2014**Page 1 of 2**

Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
LOCAL COMMUNITY				
• Regional* Population				
- Site-related	Increase of 12,000 people	Increase of 3,100 people		No change
- Total **	188,300 people	179,400 people		176,300 people
• Regional* Employment				
- Direct	Increase of 6,050 jobs	Increase of 1,880 jobs		No change
- Indirect	Increase of 6,000 jobs	Increase of 1,400 jobs		No change
- Total **	142,120 jobs	133,350 jobs		130,070 jobs
• Traffic (trips generated)				
- Flight Operations (annual)	Increase of 56,590	Increase of 37,445		No change
- Increase of 22,860	Increase of 20,960	No increase		No change
• Water Demand (gpd)				
- Sewage Demand (gpd)	Increase of 2.6 million	Increase of 1.5 million		No change
- Solid Waste Generation (cubic yards/day)	Increase of 1.3 million	Increase of 0.7 million		No change
- Increase of 100	Increase of 50	Increase of 30		No change
• Electricity Demand (MMWh/day)				
- Natural Gas Demand (therms/day)	Increase of 265	Increase of 13,925		No change
- Coal Demand (tons/day)	Increase of 80	Increase of 6,400		No change
		Increase of 40	Increase of 20	
				No change

* Regional refers to the two-county region comprising Champaign and Ford counties.

** Total population/employment projections include both site-related effects and non-site-related growth.

Table 2.6-2. Summary of Influencing Factors for Reuse of Chanute AFB in the Year 2014

Page 2 of 2

Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
HAZARDOUS MATERIALS/HAZARDOUS WASTE MANAGEMENT <ul style="list-style-type: none"> Land Use 	<p>Acquisition of about 600 acres and avigational easements for 20 acres off base required. Relocation of 3 inhabited dwellings. Loss of 576 acres of prime farmland to airfield expansion and aircraft maintenance facility.</p>	<p>Acquisition of about 230 acres. Avigational easements for 20 acres off-base. Loss of 231 acres of prime farmland to airfield expansion.</p>	<p>No property acquisition or avigational easements.</p>	<p>No change</p>
<ul style="list-style-type: none"> Hazardous Materials Hazardous Waste IRP Storage Tanks PCBs Asbestos Radon Pesticides and Herbicides Biomedical 	<p>Increase in types and quantities. Effective management to be implemented.</p> <p>Increase in types and quantities. Effective management to be implemented.</p> <p>No impact to IRP program</p> <p>New tanks to be installed and managed</p> <p>No impact</p> <p>Effective management strategies to be implemented for renovation/demolition</p> <p>No impact</p> <p>Effective management to be implemented</p> <p>No impact</p>	<p>Increase in types and quantities. Effective management to be implemented.</p> <p>Increase in types and quantities. Effective management to be implemented.</p> <p>No impact to IRP program</p> <p>New tanks to be installed and managed</p> <p>No impact</p> <p>Effective management strategies to be implemented for renovation/demolition</p> <p>No impact</p> <p>Effective management to be implemented</p> <p>No impact</p>	<p>No impact</p> <p>No impact</p> <p>No impact to IRP program</p> <p>New tanks to be installed and managed</p> <p>No impact</p> <p>Effective management strategies to be implemented for renovation/demolition</p> <p>No impact</p> <p>Effective management to be implemented</p> <p>No impact</p>	<p>No change</p> <p>No change</p> <p>No impact to IRP program</p> <p>No change</p> <p>No change</p> <p>No impact</p> <p>No impact</p> <p>No impact</p> <p>No impact</p>

Table 2.6-3. Summary of Environmental Impacts of Reuse of Chanute AFB in the Year 2014

Resource Category	Proposed Action	Minor Aircraft Maintenance Operations Alternative	Non-Aviation Alternative	No-Action Alternative
NATURAL ENVIRONMENT	<ul style="list-style-type: none"> • Geology and Soils • Water Resources • Air Quality • Noise • Biological Resources 	<p>Minor increase in runoff and erosion during construction</p> <p>Potential impact on water flow and drainage patterns due to construction</p> <p>Increased emissions from aircraft operations, and motor vehicles and heating system will not exceed NAAQS or IAAQS</p> <p>No residences are within 65 DNL noise levels</p> <p>Loss of vegetation due to construction</p> <p>Adverse affect to historic structures due to potential transfer from Federal ownership. Potential impacts due to demolition and renovation.</p>	<p>Minimal increase in runoff and erosion due to limited construction activities</p> <p>Minimal impacts on drainage pattern due to limited construction</p> <p>Increased emissions from motor vehicles and heating system will not exceed NAAQS or IAAQS</p> <p>No impacts caused by traffic noise</p> <p>Loss of vegetation due to construction</p> <p>Adverse affect to historic structures due to potential transfer from Federal ownership. Potential impacts due to demolition and renovation.</p>	<p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>No impacts</p> <p>Potential impacts to quality or integrity of historic properties.</p>



CHAPTER 3 AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This section addresses the environmental conditions of Chanute AFB and its region of influence (ROI) as they would be at the time of base closure (October 1993). The disposal and reuse of Chanute AFB may cause changes in the communities near the base. These communities include, but are not limited to, the Village of Rantoul, Paxton, and Champaign-Urbana.

3.1 INTRODUCTION

This section provides information to serve as a baseline from which to identify and evaluate environmental changes. Although this EIS focuses on the biophysical environment, some non-biophysical elements are addressed to the extent that they directly impact the environment. The non-biophysical elements of population and employment, land use and aesthetics, public utility systems, and transportation networks in the regional and local communities are addressed. This section also describes hazardous materials found on base, storage tanks, asbestos, herbicides and pesticides, polychlorinated biphenyls (PCBs), radon, and medical/biohazardous wastes, and discusses the IRP. Finally, it describes the pertinent natural resources of geology and soils, water quality, air quality, noise, biological resources, and cultural resources.

The ROI to be studied will be defined for each resource area pertinent to the Proposed Action and alternatives. The ROI determines the geographical area to be addressed as the Affected Environment. Although the base boundary may constitute the ROI limit for many resources, potential impacts associated with certain issues (e.g., air quality, utility systems) often transcend these limits. ROIs must be carefully delineated to allow an accurate analysis that provides the basis for Air Force decision-making regarding base disposal and reuse.

The baseline assumed in this document is the conditions projected at base closure. Impacts associated with disposal and/or reuse activities may then be addressed separately from the impacts associated with base closure. General preclosure conditions and impacts of closure were addressed in the closure EIS (U.S. Air Force, 1990c). A reference to preclosure conditions (1988) is provided, where appropriate (e.g., air quality), to provide a comparative analysis over time. This will assist the decision maker and agencies in understanding potential long-term impacts in comparison to conditions when the installation was active.

3.2 LOCAL COMMUNITY

3.2.1 Community Setting

Chanute AFB is in east-central Illinois, approximately 120 miles south-southwest of Chicago and approximately 190 miles northeast of St. Louis. The base is in north-central Champaign County (Figure 3.2-1), approximately 15 miles

north-northwest of the Champaign-Urbana metropolitan area, the largest population center in Champaign County. Chanute AFB comprises 2,121 acres within the incorporated limits of the Village of Rantoul (Figure 3.2-2). Rantoul is the third largest community in Champaign County, with a population of about 17,200.

U.S. Highway 45 (U.S. 45), adjacent to the west boundary of the base, provides highway access to Chanute AFB from the north and south. An interchange at Interstate 57 (I-57) northwest of the base provides access to the interstate highway system. Additional major highways (I-74, I-72, and U.S. 136) provide connecting east-west access.

A main line of the Illinois Central Railroad (ICR) is adjacent to the base and AMTRAK passenger service is provided from a station in downtown Rantoul. Scheduled airline service is also provided at Willard Airport, 20 miles south of the base.

Chanute AFB and Champaign County, in general, experience temperate continental climatic conditions typical of the interior continental United States. Characteristically, temperatures cover a broad range, from approximately 100 degrees Fahrenheit ($^{\circ}$ F) in summer to -25 $^{\circ}$ F in winter. The average annual precipitation in Champaign County is 36 inches. Most rainfall occurs from April through September; snowfall occurs during November through March. The prevailing wind is from the southwest, but winter winds may be out of the west or northwest. The wind speed is usually greater during the winter and early spring, but averages approximately 7 miles per hour (mph) annually.

By closure, the population of the two-county ROI (Champaign and Ford counties) is projected to be 167,050. This estimate does not include any reuse of the Chanute AFB property. In 1988, the population in the two counties was approximately 185,210 (U.S. Bureau of the Census, 1990). In 1990, Rantoul's population, by final 1990 census counts, was 17,212, of whom 8,038 persons (military and civilian) were estimated to be associated with Chanute AFB operations. Thus, Rantoul's (1990) population excluding Chanute AFB was 9,174.

In FY 1990, Chanute AFB had a total military and dependent population of 7,409, which included 4,122 active duty military and trainees and 3,287 dependents. Approximately 1,570 military retirees lived in the region in 1990. The trainee population decreased by 57 percent, from 4,164 in FY 1987 to 1,791 in FY 1990. The total military-related population, including all military personnel and their dependents, declined by 5,843 during that period, representing a decrease of 44 percent (from 13,252 in FY 1987 to 7,409 in FY 1990). At closure, the base-related population will decrease to approximately 50 disposal management team employees.

Regional Map

Chanute AFB Rantoul, Illinois

Key Map

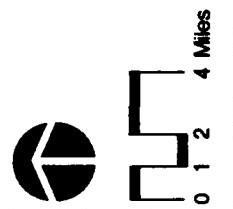
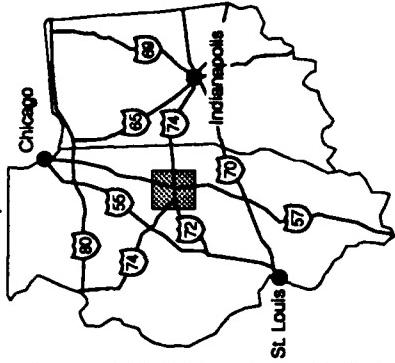
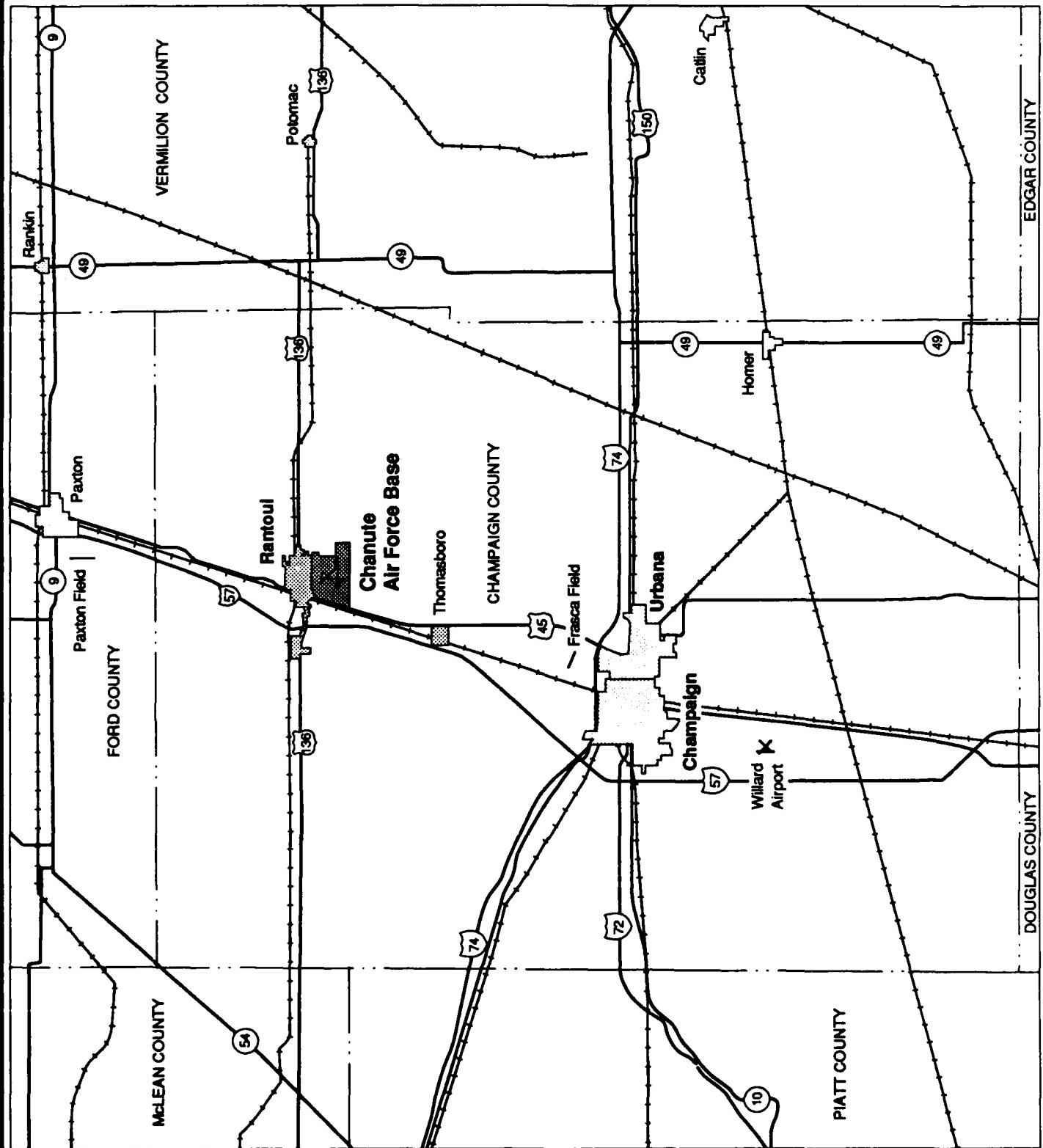
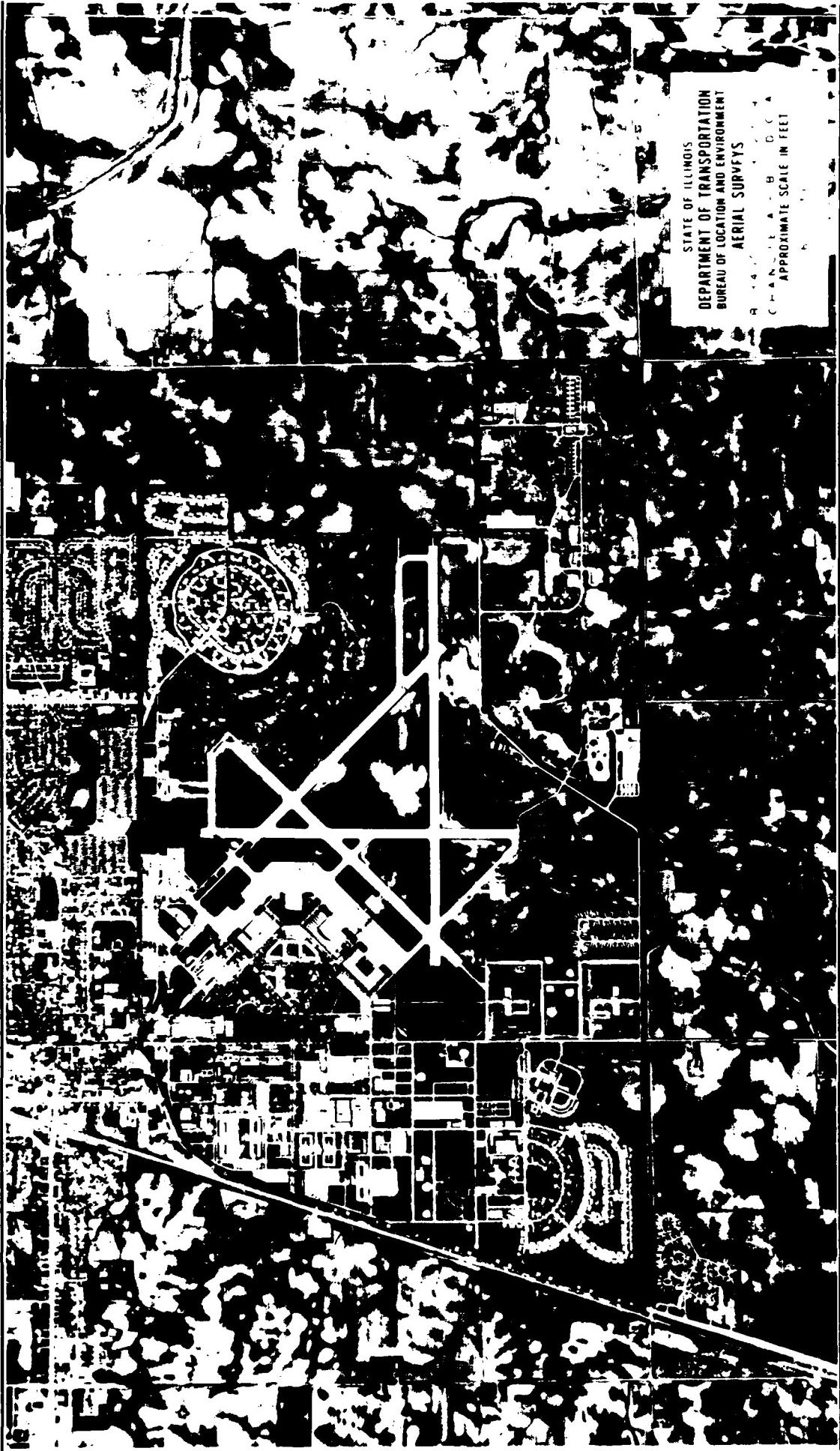


Figure 3.2-1





**Chanute AFB
Vicinity**

Figure 3.2-2

The regional economy is dependent on government jobs (federal, state, and local), manufacturing, and farming. In 1988, there were approximately 117,650 jobs in Champaign and Ford counties; manufacturing provided the largest number of nongovernment jobs. In the Champaign-Urbana area, the Carle Hospital/Clinic; Kraft, Inc.; J.M. Jones; and Colwell Systems together employed about 6,715 people. There were approximately 37,670 government (civilian and military) jobs in the ROI. By October 1993, approximately 9 percent of the direct and indirect jobs in the ROI will be affected by base closure. The projected regional employment at closure is 130,070.

In 1988, approximately 8,400 people were employed directly by Chanute AFB. The major nongovernment employers in Rantoul are Caradco, Bell/Vetter, Rantoul Products, Eagle Wings Industries, and Combe, Inc. (Illinois Department of Commerce and Community Affairs, 1990b). Together, these five companies employ approximately 2,300 people.

A detailed analysis of socioeconomic conditions and potential impacts of the Proposed Action and analysis are provided in the *Socioeconomic Impact Analysis Study*, being prepared separately and concurrently with this EIS.

3.2.2 Installation Background

Chanute Field was established in May 1917 as a World War I pilot training facility. The base was named in honor of Octave Chanute, an engineer and aviation pioneer who established several principles of flight during the nineteenth century. From 1919 to 1921, the base was used as a storage depot for aircraft engines and paint. In the early 1920s, mechanical, photographic, and communication training activities were transferred to the base, which became the Air Corps Technical School for aircraft mechanics in 1922. Appropriations were authorized to expand and modernize the base to its present size in 1938. Three years later, the Air Corps Technical Training Command established its first headquarters at the base. During World War II, aircraft maintenance, weather observation, life support, and metallurgy training were conducted at the base.

Since World War II, the base's primary mission has been military and technical training for Aerospace Weapon Systems support personnel. The base was the primary installation providing training in the operation of B-52 and B-58 long-range bombers and various missiles (e.g., Atlas, Thor, Minuteman, Hound Dog, Bomarc, and the Short Range Attack Missile). Chanute Technical Training Center (CTTC) was established in January 1959, and the former training wing was renamed the 3345th Technical School. The technical school was redesignated three times, first as the United States Air Force School of Applied Aerospace Sciences in 1972, then as the 3350th Technical Training Wing in 1977, and finally as the 3330th Technical Training Wing in 1979. The 3330th Technical Training Wing remains the current host unit at Chanute AFB.

At the direction of the Commission on Base Realignments and Closures, the Secretary of Defense has ordered CTTC courses to be transferred to other technical training centers beginning 1 January 1990, with completion scheduled by 30 September 1993.

3.2.3 Land Use and Aesthetics

This section describes the projected land uses and aesthetics on the base and the surrounding area at base closure. As indicated by community planning efforts, projected land uses at closure are assumed to be similar to existing land uses in the base vicinity. The ROI for land use and aesthetics includes the base property and potentially affected adjacent properties that are within the jurisdiction of the Village of Rantoul and Champaign County.

Chanute AFB is entirely within the Village's incorporated limits. Rantoul exercises planning, zoning, and subdivision control within its boundaries and has extraterritorial jurisdiction for planning and subdivision review within 1.5 miles outside the Village boundaries. Other unincorporated areas surrounding the base are under the jurisdiction of Champaign County, which exercises zoning and subdivision control in these areas.

3.2.3.1 Land Use

On-Base Land Use. Chanute AFB will continue to provide technical training for the U.S. Air Force, Air Force Reserves, Air National Guard, and other DOD agencies until base closure. The base property, which comprises 2,121 acres, includes the following general land uses:

	<u>Acreage</u>
• Aviation support	140
• Institutional (education/training)	27
• Industrial	241
• Institutional (medical)	25
• Commercial	90
• Public/recreation	438
• Open space	448
• Residential	348
• Agricultural	364

The existing land uses for Chanute AFB and vicinity are shown on Figure 3.2-3. Each on-base land use category is described briefly below.

The Aviation Support and Educational/Training areas support maintenance training for aircraft ground equipment and jet engines. Training is also offered in liquid fuels, weather, fire, and other aviation-related activities. The aviation support facilities include the following:

- Four high-bay hangars
- Classrooms and laboratories
- Administrative offices.

Rantoul and Chanute AFB Existing Land Use

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

1	Not Applicable
2	Aviation Support
3	Institution (Educational/ Training)
4	Industrial
5	Institution (Medical)
6	Commercial
7	Public/Recreation
8	Residential
9	Agriculture
10	Open Space
	Base Boundary

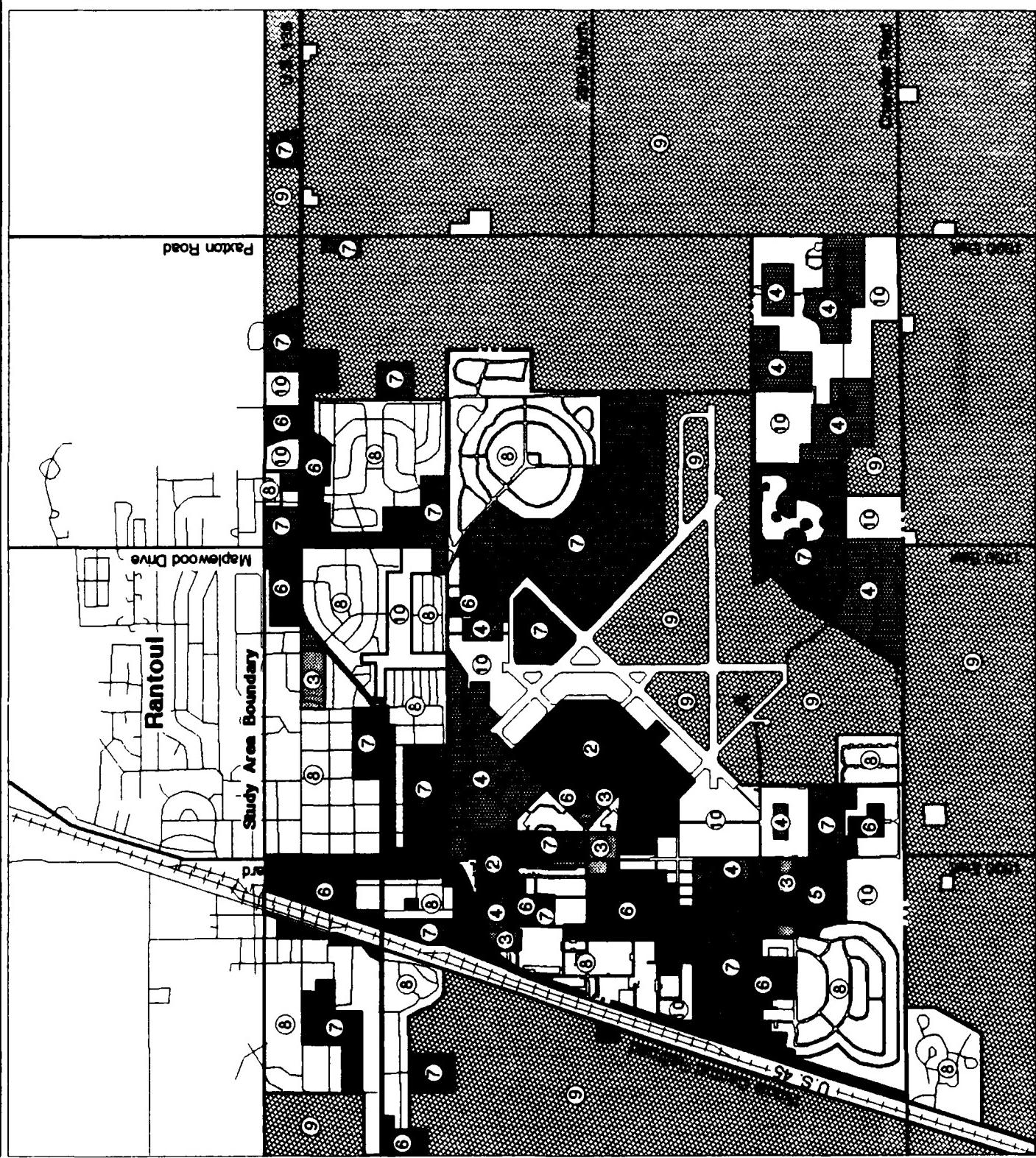


Figure 3.2-3

Aviation areas are primarily located in the northwest quadrant of the base, except for fire protection/rescue and fuels training. These facilities are isolated for environmental and safety reasons and are consolidated in the southeast corner of the base.

The airfield at Chanute AFB is presently closed to aircraft operations because aircraft operational uses are not required to support the base's technical training mission. The airfield consists of four runways of the following lengths:

Runway 9/27	- 6,300 feet
Runway 18/36	- 5,000 feet
Runway 13/31	- 5,740 feet
Runway 5/23	- 5,157 feet

The taxiways and apron pavement conditions of the four runways vary from very good to unsafe for aircraft operations (U.S. Air Force, 1990a). There are no air traffic control facilities, navigational aids, or instrument approaches at the airfield.

The **Medical** area, in the southwest portion of the base, includes the base hospital, dental clinic, and child day care facilities.

The **Industrial** areas contain the sewage treatment plant (out of operation), cold storage warehouse, distribution/storage facilities, central heating plant, fire station, fire training facility, fuel training facility, and engine test cells. The principal industrial areas are between the north base boundary and the airfield and in the southeast quadrant of the base. Other industrial uses are dispersed throughout the northwest quadrant of the base.

The **Commercial** area contains such facilities as the commissary, the base exchange, two theaters, a bank, a post office, restaurants, and a gymnasium. The community commercial center is in the northwest quadrant of the base. Other commercial facilities are scattered over the base; for example, service stations are located at the two north gates. The commercial area also includes security facilities, a data processing facility, a library, a chapel, and other administrative facilities. The administrative areas are primarily in the northwest quadrant of the base, but other administrative facilities are scattered throughout the base.

The **Recreation** areas contain the golf course, youth center, athletic forum, arts and crafts facility, bowling alley, static aircraft display area, ballfields, parade grounds, and Heritage Lake. Multiple use outdoor recreation facilities are located in three principal areas:

- An active recreation facility near the existing housing areas and the community commercial center
- Heritage Lake in the southeast quadrant of the base
- The golf course and clubhouse northeast of the airfield.

In addition, there are several existing smaller recreation areas located throughout the base.

The Open Space areas allow for safety buffer zones and provide a buffer between land uses. These areas are primarily located around the southwest residential areas and in the southeast industrial areas. In addition to the military land uses, 300 acres of land near the runway and in the southeast corner of the base are leased for agricultural purposes. The majority of this land is required to maintain separation between the runway, taxiways, and aprons. The lease will likely be in effect at base closure.

The Residential areas contain dormitories, apartments, and family housing. The dormitories are at the west edge of the base in the northwest quadrant, and the apartments are at the center of the northwest quadrant, west of the parade ground. Family housing units are in the northwest and southwest quadrants of the base, and on the east side of the parade ground.

There are several on-base easements and ROWs for utility lines and roads that cross the installation and the government-owned railroad spur. Table 3.2-1 is an inventory of easement agreements, licenses, permits, and leases that will potentially be available for transfer upon base closure.

Off-Base Land Use. Off-base land uses include agricultural and urban development within the Village of Rantoul (see Figure 3.2-3). The land use development pattern in the vicinity of Chanute AFB is dominated by 1-mile by 1-mile section lines characteristic of the Midwest. The nearest major urban area is Champaign-Urbana, 15 miles south of Rantoul (see Figure 3.2-1).

Village of Rantoul land uses adjacent to the north boundary of Chanute AFB include public, commercial, and residential. The public land use areas include Maplewood Elementary School, east of Maplewood Drive, and Walbash Park and J.W. Eater Junior High School, east of Century Boulevard. The commercial facilities are located along both sides of Maplewood Drive and Century Boulevard (the streets leading into the base gates). The residential areas include one-story wood frame and brick single-family houses and a mobile home park at the end of the base's north-south runway (see Figure 3.2-3).

The off-base land at the east end of the base's east-west runway is used solely for agricultural crop production. The land slopes gently to the southeast and drains into Salt Fork Creek.

The off-base area east of the base golf course and the adjacent residences is used for agricultural crop production. A farmstead with three inhabited structures is on the east side of Township Road 1800 East. The land slopes to the southeast and drains into both the Upper Salt Fork Drainage Ditch and Salt Fork Creek. Township Road 1800 East, running north-south, and 2900 North Road, running east from Township Road 1800 East, are in this area.

Table 3.2-1. Inventory of Easement Agreements, Licenses, Permits and Leases

Document Number	Expiration Date	Description/Location	Responsible Party
11-032 ENG-6129 (Easement)	Indefinite	ROW for Tanner Street crossing	Village of Rantoul
042-456 (Easement)	09/16/2006	ROW underground telephone cable (along west side)	ALLTEL Illinois Incorporated
11-032 ENG-6126 (Easement)	Indefinite	ROW railroad spur crossing Chanute	State of Illinois
11-032 ENG-7116 (Easement)	Indefinite	ROW	State of Illinois
11-032 ENG-9063 (Easement)	12/28/2011	ROW railroad spur crossing Chanute	Julian D. Johnson
11-032 ENG-10249 (Easement)	Indefinite	ROW railroad spur crossing Chanute	Rogers Chevrolet Company
11-032 ENG-12489 (Easement)	01/10/2015	maintain drainage line	Elmer C. Bush
ATCCHA 2-90-018 (Easement)	03/08/95	ROW railroad spur	Charles Leemon
11-032 ENG-6124 (License)	Indefinite	power transmission lines	Central Illinois Public Service Company
27-3-83-15 (License)	01/27/93	Maintain and repair buried and overhead lines	Eastern Illinois Telephone Corporation
45-3-78-6016 (License)	12/31/92	occupancy of 0.08 acres of land	American National Red Cross
ATCCHA3-88-009 (License)	06/30/93	advanced driving maneuvers	State of Illinois
ATCCHA3-88-012 (License)	06/30/93	advanced driving maneuvers	Parkland College Champaign, Illinois
ATCCHA 3-90-016 (License)	12/31/94	office space at no cost	Civil Air Patrol Chanute AFB
45-4-75-6062 (Permit)	09/30/93	use of land and buildings	DRMO
11-032 ENG-6127 (Permit)	Indefinite	sewer system in Chapman Courts	C.E. Mulliken
11-032 ENG-6128 (Permit)	Indefinite	soil line pipe and water distribution	C.E. Mulliken
No Number (Permit)	05/17/2084	East Gate entrance sign	Rantoul Mayor's Office
5-21579 (Permit)	04/01/94	mow grass outside of boundary fence	State of Illinois
22-1-70-39 (Lease)	06/30/95	land usage for credit union	Credit Union
27-1-87-18 (Lease)	02/28/92	land usage for farming (311.0 acres)	Frerichs Farm Incorporated
ATCCHA 1-88-020 (Lease)	09/30/93	bus terminal	Greyhound Lines Incorporated
ATCCHA 1-90-030 (Lease)	04/30/93	office space (room K108, Bldg. 3)	National Federation of Federal Employees
ATCCHA 1-89-015 (Lease)	02/28/94	building usage for telephone center	ALLTEL Illinois Incorporated

The off-base land at the north end of the north-south runway includes two mobile home parks that are separated by vacant land. The area is flat and drains to the east-northeast.

Zoning. The current zoning plan for Chanute AFB and Rantoul is shown in Figure 3.2-4. The Village of Rantoul adopted an updated and revised zoning ordinance on 22 January 1991 (Village of Rantoul, 1991). Prior to disposal, Chanute AFB would not be subject to local zoning regulations because it is a federal installation. When a parcel is conveyed to a non-federal agency, that parcel would be subject to zoning. In view of the closure and proposed reuses of Chanute AFB, the Village of Rantoul has included new zoning classifications within its ordinance. For the purposes of this environmental analysis, the following new zoning categories are assumed to be in effect at the time of base closure:

A-1	Agriculture District
R-1 through R-4	Residential District (single family to multi-family)
C-1	Neighborhood Commercial District
C-2	General Commercial District
CR-1	Airfield District
CR-2	Aviation Support District
CR-3	Institutional (educational, training, and medical) District
CR-4	Public Recreation District
I-1	Industrial (light) District
I-2	Industrial (heavy) District
M-1	Mobile Home Park District

The proposed zoning districts that would apply to the base property at the time of disposal are described below.

The **Airfield District** provides for a regional airport for jet aircraft. The maximum height of buildings or other structures shall be 50 feet and can be increased to 100 feet by the authority of the Board of Zoning Appeals. The proposed ordinance states that the Airfield District shall consist of a single lot. The owner of the airport may lease portions of the land in the Airport District to others for permitted uses.

The **Aviation Support District** provides an area for airfield support facilities, such as hangars, towers, repair facilities, administrative offices, warehouses, and other related facilities. The maximum height of buildings or other structures shall be 35 feet and can be increased to 65 feet provided that for every foot in excess of 35 feet there shall be added to the setback requirement 1 foot of width or depth. The minimum lot size shall be 50,000 square feet with building setback requirements. No lot shall be more than 50 percent covered by a building. Off-street parking and landscaping shall be provided as specified in the ordinance.

The **General Commercial District** is designed to accommodate community or regional shopping and service facilities. The maximum height of buildings or other structures shall be 35 feet and can be increased to 65 feet provided that

Rantoul Existing Zoning

Chanute AFB
Rantoul, Illinois

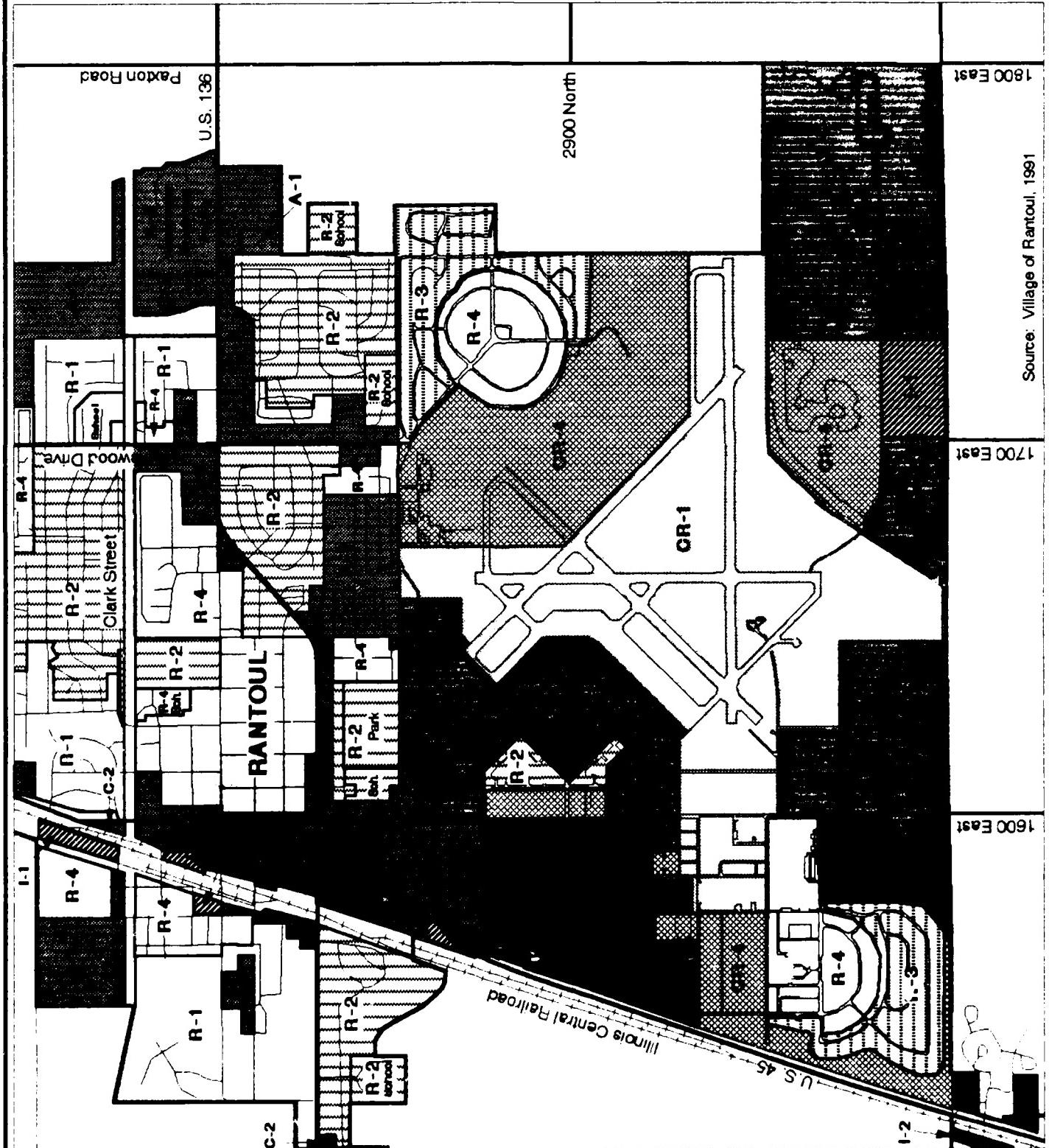
EXPLANATION

- | | |
|--|---------------------------------|
| | A-1 Agricultural District |
| | C-2 Commercial District |
| | I-1 Light Industrial District |
| | I-2 Heavy Industrial District |
| | R-1 Single-Family District |
| | R-2 Single-Family District |
| | R-3 Duplex Housing District |
| | R-4 Multi-Family District |
| | CR-1 Airfield District |
| | CR-2 Aviation Support District |
| | CR-3 Institutional District |
| | CR-4 Public Recreation District |
| | City Limits |



Figure 3.2-4

Source: Village of Rantoul, 1991



for every foot in excess of 35 feet there shall be added to the setback requirement 1 foot of width or depth. The minimum lot size shall be 6,000 square feet, and the minimum lot width (at the building line) 50 feet. No lot shall be more than 40 percent covered by a building. Off-street parking, loading space, and landscaping shall be provided as specified in the ordinance.

The **Institutional District** provides for dormitories for educational facilities, classrooms, and health care facilities. The maximum height of buildings or other structures shall be 35 feet and can be increased to 65 feet provided that for every foot of height in excess of 35 feet there shall be added a setback requirement of 1 foot of width or depth, or as authorized by the Board of Zoning Appeals. The minimum lot size shall be 50,000 square feet with building setback requirements. No lot shall be more than 50 percent covered by a building. Off-street parking and landscaping shall be provided as specified in the ordinance.

The **Public Recreation District** provides open spaces and both active and passive recreational areas. The maximum height of buildings or other structures shall be 35 feet. No lot shall be more than 50 percent covered by a building. Off-street parking and landscaping shall be provided as specified in the ordinance.

The **Light Industrial District** provides for light manufacturing and processing or assembly plants, excluding heavy industrial uses. The maximum height of buildings and other structures shall be 35 feet and can be increased to 65 feet provided that for every foot in excess of 35 feet there shall be added to the setback requirement 1 foot of width or depth. The minimum lot size shall be 8,000 square feet with building setback requirements. Off-street parking and landscaping shall be provided as specified in the ordinance.

Residential Districts provide for single-family detached dwellings, two-family dwellings, and multi-family dwellings. The maximum height of the buildings shall be 35 feet, except that such height may be increased to a maximum of 65 feet provided that for every foot of height in excess of 35 feet there shall be added to the setback 1 foot of width or depth. The minimum lot area per dwelling unit varies from 7,000 square feet for single-family dwellings (R-1) to 1,500 square feet for each multi-family dwelling unit (R-4). Off-street parking and landscaping shall be provided as specified in the ordinance.

Land Use Plans. A Comprehensive Development Plan was prepared for the Village of Rantoul (City Planning Associates, Inc., 1967); however, this plan does not reflect any changes in the base vicinity.

3.2.3.2 Aesthetics. Visual resources include natural and man-made features that give a particular environment its aesthetic qualities. Criteria used in the analysis of visual resources include visual sensitivity, which is the degree of public interest in a visual resource and concern over adverse changes in the

quality of that resource. Visual sensitivity is categorized as high, medium, or low sensitivity levels.

High sensitivity exists where views are rare, unique, or in other ways special, such as in remote or pristine areas. The areas would include landscapes that have landforms, vegetative patterns, water bodies, or rock formations of unusual or outstanding quality. The existing static air display in the western portion of the base is a unique visual resource that can be seen from U.S. 45.

Medium visual sensitivity areas are more developed than those of high sensitivity. Human influence is more apparent in these areas, and the presence of motorized vehicles and other evidence of modern civilization is commonplace. These landscapes generally have features containing variety in form, line, color, and texture, but tend to be more common. The following areas at Chanute AFB are considered to be of medium visual sensitivity:

- The developed recreation area around Heritage Lake
- The cantonment area to the west of the hangars, which includes White Hall, administrative buildings, and the officer's housing area
- The golf course.

Low visual sensitivity areas are those not identified as of high or medium sensitivity. These areas tend to have minimal landscape features, with little change in form, line, color, and texture. The portions of Chanute AFB not described above are considered to have low visual sensitivity.

Only a few areas of Chanute AFB are readily visible from off base. The west side of the base is visible from U.S. 45, the south side from Chandler Road, and the southeast corner from Township Road 1800 East. Family housing, fire training facilities, jet engine test cells, and open space can be seen from Chandler Road. The test cells and the north end of the runway can be seen from Township Road 1800 East. The runway and test cell areas are of low scenic quality. The institutional and residential areas of the base are not readily visible from off base because of mature trees located on base next to U.S. 45.

The agricultural areas to the south, east, and west of the base are generally of low visual sensitivity. The area immediately north of the base, in the Village of Rantoul, includes residential, commercial, and public uses, which are of medium visual sensitivity.

The aesthetics of Chanute AFB, especially in the main cantonment area, have been enhanced by numerous landscape projects through the years. Ornamental trees planted along most of the streets in this area are now mature. This portion of the base has a campus-like atmosphere, including brick veneer buildings up to four stories high. New walkways, lighting, landscape plantings, benches, landscape furniture, and sodding were recently completed to the west of White Hall in the open space area.

Other on-base improvement projects conducted in the 1980s include construction of the following major buildings:

- Meteorological training facility
- Cold storage building
- Quarters for visiting airmen and officers
- Housing supply and storage facility
- Base exchange
- Commissary
- Gymnasium
- Youth center
- Fire/rescue training facility.

These new building projects have been constructed using brick to complement the base's original brick buildings.

There are approximately 447 acres of open space at Chanute AFB, providing different visually pleasing sites during the four seasons. The 18-hole golf course has mature tree-lined fairways, a man-made pond, and many landforms that enhance the visual appeal of the course. The base includes a park with landforms, an air park, small trees, and a man-made pond called Heritage Lake. The area west of White Hall is considered one of the most scenic areas on base because it has a campus-like appearance.

3.2.4 Transportation

The ROI for the transportation analysis includes the existing principal road, air, and rail networks in northern Champaign and southern Ford counties. The analysis focuses on the segments of the transportation networks in the region that serve as direct or mandatory indirect linkages to the base, and those that are commonly used by personnel at Chanute AFB. The area in the immediate vicinity of the base is of special interest.

3.2.4.1 Roadways. Traffic volumes typically are reported as either the daily number of vehicular movements in both directions on a segment of roadway, averaged over a full calendar year (average annual daily traffic [AADT]) or the number of vehicular movements on a road segment during the average peak hour. The average peak-hour volume has been determined to be approximately 10 percent of the AADT (Transportation Research Board, 1985). These values are useful indicators in determining the extent to which the roadway segment is used and in assessing the potential for congestion and other problems.

Actual traffic conditions are generally reported in terms of levels of service (LOS), rating factors that represent the general freedom (or restriction) of movement on roadways (Table 3.2-2). The LOS scale ranges from A to F, with LOS E representative of conditions that, although not favorable from the point of view of the motorist, provide the greatest throughput per hour. Low-volume, high-speed, free-flowing conditions tend to be classified as LOS A. As traffic

Table 3.2-2. Road Transportation Levels of Service

LOS	Description	Criteria (Volume/Capacity)	
		Freeway	2-Lane Highway
A	Free flow with users unaffected by presence of others in traffic stream.	0 - 0.35	0 - 0.10
B	Stable flow, but presence of other users in traffic stream becomes noticeable.	0.36 - 0.54	0.11 - 0.23
C	Stable flow, but operation of single users becomes affected by interactions with others in traffic stream.	0.55 - 0.77	0.24 - 0.39
D	High density, but stable flow; speed and freedom of movement are severely restricted; poor level of comfort and convenience.	0.78 - 0.93	0.40 - 0.57
E	Unstable flow; operating conditions near capacity with reduced speeds, maneuvering difficulty, and extremely poor levels of comfort and convenience.	0.94 - 1.00	0.58 - 0.94
F	Forced or breakdown flow with traffic demand exceeding capacity; unstable stop-and-go traffic.	> *1.00	> *0.94

* Greater than.

Source: Transportation Research Board, 1985.

volumes increase or traffic-handling capacities along given roadways decrease, free-flow conditions become restricted and LOS deteriorates. LOS F represents breakdown, stop-and-go conditions.

LOS values usually represent the peak-hour (morning and evening "rush hour") conditions and depend on the physical characteristics of the roadway, traffic volumes, and the vehicular mix of traffic, reported for typical clear-weather conditions. A common design goal is to provide peak-hour service at levels no lower than LOS C or D. A typical two-lane rural highway will have a maximum two-way design capacity of 2,800 passenger vehicles per hour. On such roads, travel is substantially affected by traffic in the opposing lane, and by curves and hills, all of which impair a motorist's ability to pass safely. By contrast, each lane of an Interstate highway (divided, with restricted access) will provide a capacity of about 2,000 vehicles under a wide range of conditions. In urban or suburban settings, the capacity of signalized intersections that restrict traffic flow influences LOS more than the capacity of a roadway segment. LOS ratings presented in the remainder of this subsection are determined by (1) peak-hour traffic volumes and capacity for highways and open rural roads and (2) intersection volumes and capacities for urban and suburban road segments.

Existing road and highway conditions are described at three levels: (1) regional, representing the major links within Champaign County; (2) local, representing Rantoul and its surroundings; and (3) on base.

Regional. The region surrounding Chanute AFB and the Village of Rantoul is served by an extensive network of Interstate, U.S., and state highways and

county roads (Figure 3.2-5). I-57 provides direct access between Rantoul and Champaign-Urbana (14 miles to the south) and Chicago (120 miles to the north). From Champaign-Urbana, I-74 links the region with Indianapolis to the east and Bloomington and Peoria to the northwest. I-72 provides access from Champaign-Urbana to Springfield to the southwest. U.S. 45, which roughly parallels I-57, also connects Chanute AFB and Rantoul with Chicago, and provides convenient four-lane divided highway access to the county seat at Urbana to the south.

Service levels on regional roads currently are comparatively good (free-flowing) on road segments outside the influence of urban-commuting traffic. These conditions are expected to be unchanged at base closure. Intercity traffic in the region is generally unrestricted and the rural sections of the regional-service roads can be assumed to provide acceptable levels of service.

Local. Figures 3.2-6 and 3.2-7 show the general local road network now in place and projected to be in place at the time of base closure in the immediate vicinity of the Village of Rantoul and Chanute AFB. I-57 runs north-to-south, west of Rantoul and Chanute AFB. U.S. 136 (Champaign Avenue to the west and Grove Avenue to the east) bisects the Village of Rantoul from east to west; U.S. 45 (Century Boulevard) crosses the Village from north to south and provides access from western Rantoul onto Chanute AFB. Maplewood Drive provides access from eastern Rantoul onto Chanute AFB through the base's East Gate. The base is bounded on the south by Chandler Road and roughly on the east by Township Road 1800 East, which is the extension of Paxton Road south of U.S. 136.

Preclosure (1986-1989) and closure (1993) peak-hour traffic volumes, capacities, and LOS on key community roadways are shown in Figure 3.2-8. The figure also shows the distribution of traffic to and from Chanute AFB when the East and West gates were open. U.S. 45 north of Tanner (U.S. 45 North), U.S. 45 south of Tanner (U.S. 45 South), Maplewood Drive, Chandler Road, and Township Road 1800 East are identified for this study as key community roads because these roads would provide direct access to the Chanute AFB area upon reuse. Peak-hour traffic volumes on U.S. 45 and U.S. 136 are relatively low (less than 500 vehicles) near and outside the Village limits. Local Rantoul and base traffic constitutes a substantial portion of local traffic loads (Illinois Department of Transportation, 1986). These peak-hour volumes are generally higher on road segments within the village center. Currently, the peak-hour volume on U.S. 45 North in central Rantoul near Chanute AFB's North Gate is nearly 1,400 vehicles per hour. Peak-hour traffic volume on Maplewood Drive north of the base is about 900 vehicles per hour. Peak-hour volume on U.S. 45 South leading out of Rantoul is nearly 1,900 vehicles per hour. Traffic on rural Chandler Road and Township Road 1800 East is extremely sparse (Illinois Department of Transportation, 1986, 1989).

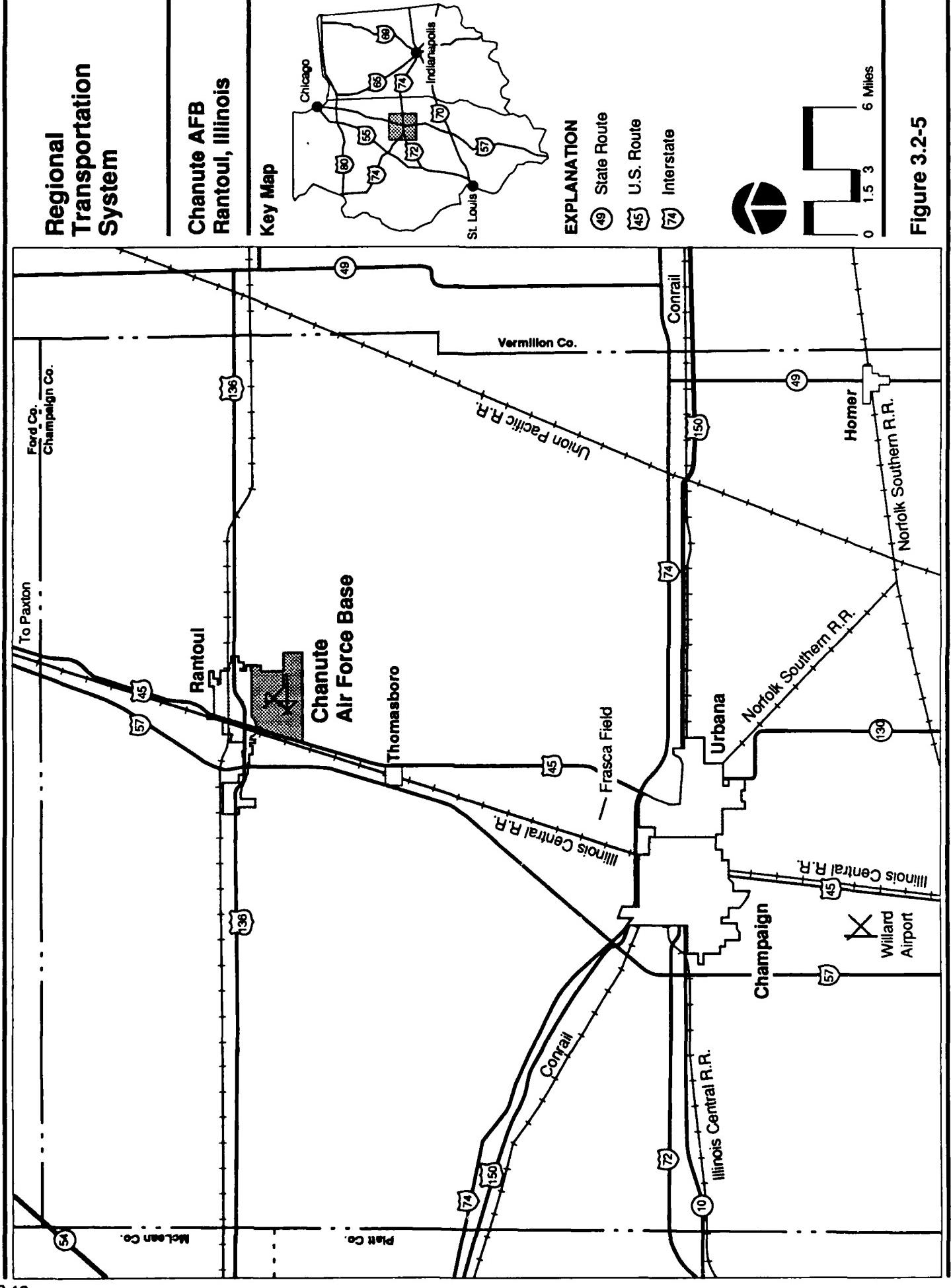


Figure 3.2-5

Area Transportation System

Chanute AFB Rantoul, Illinois

EXPLANATION

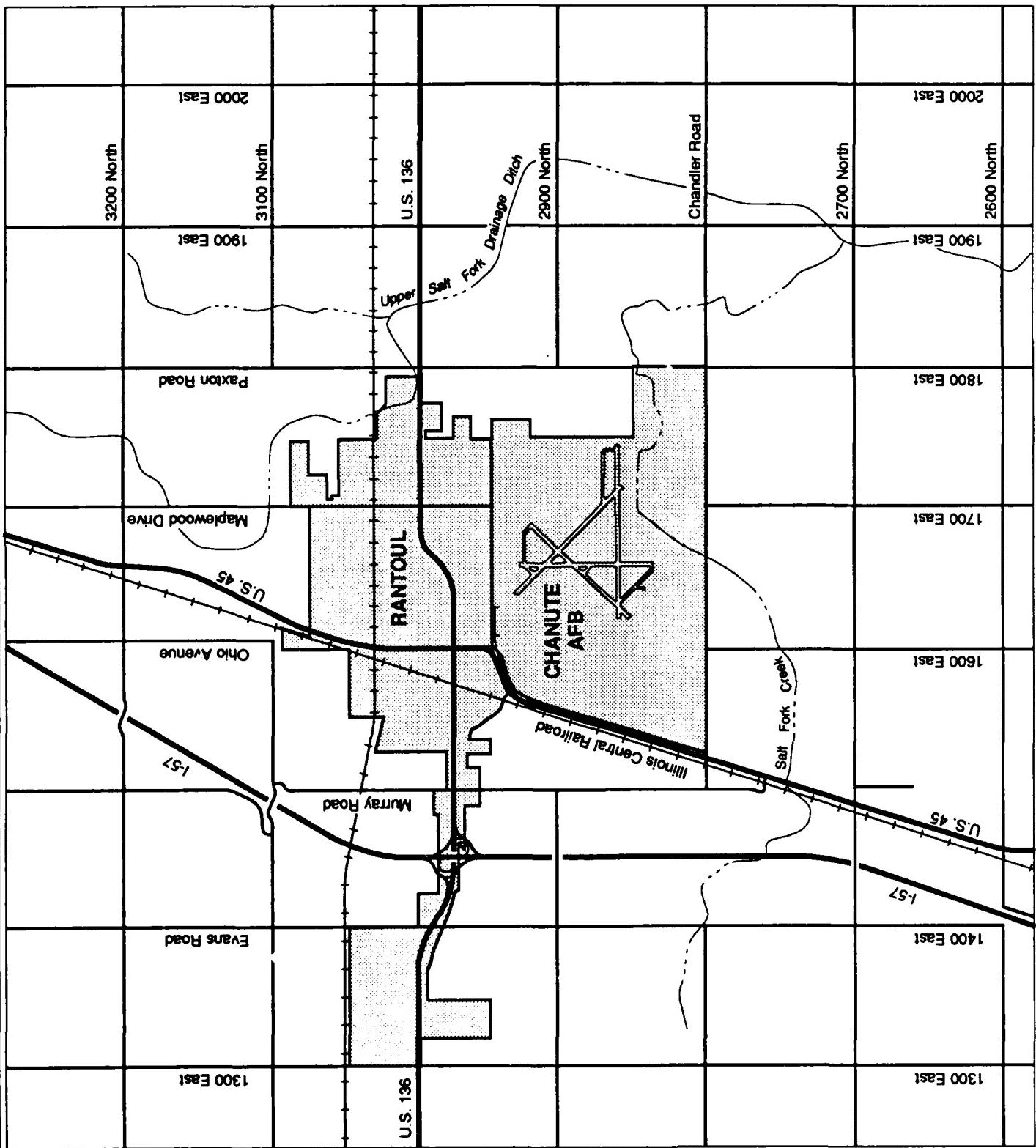
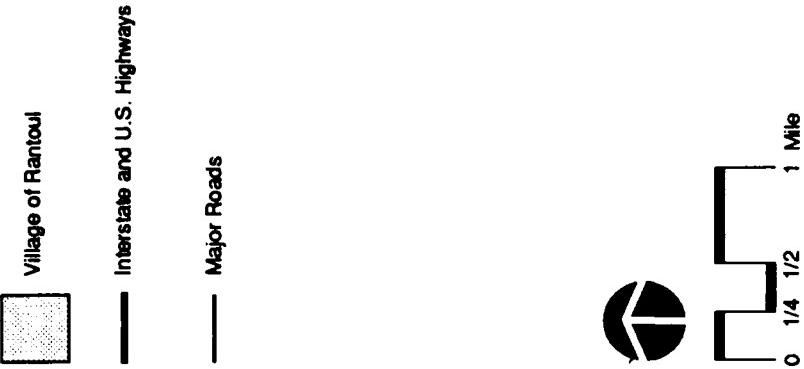


Figure 3.2-6

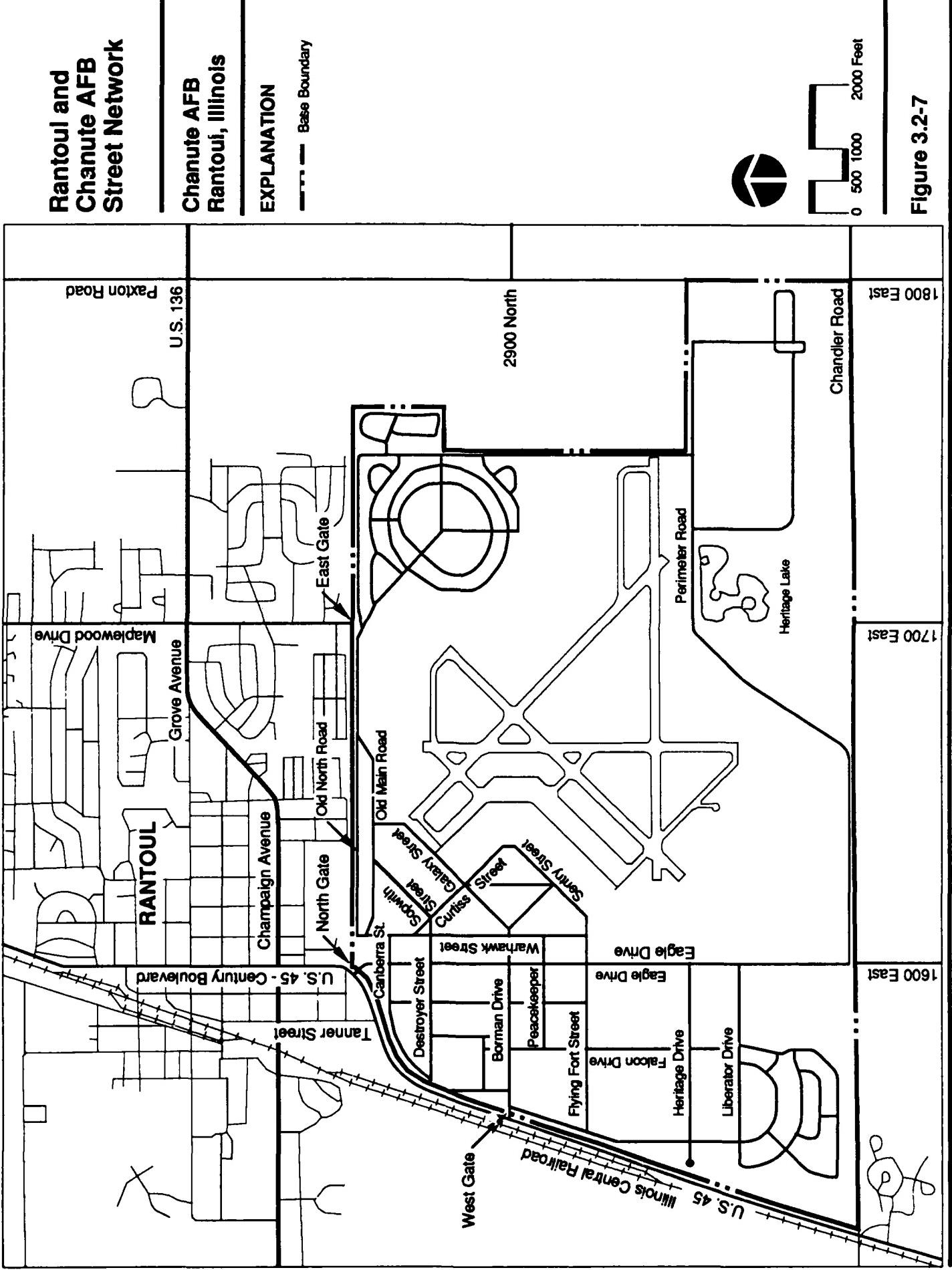
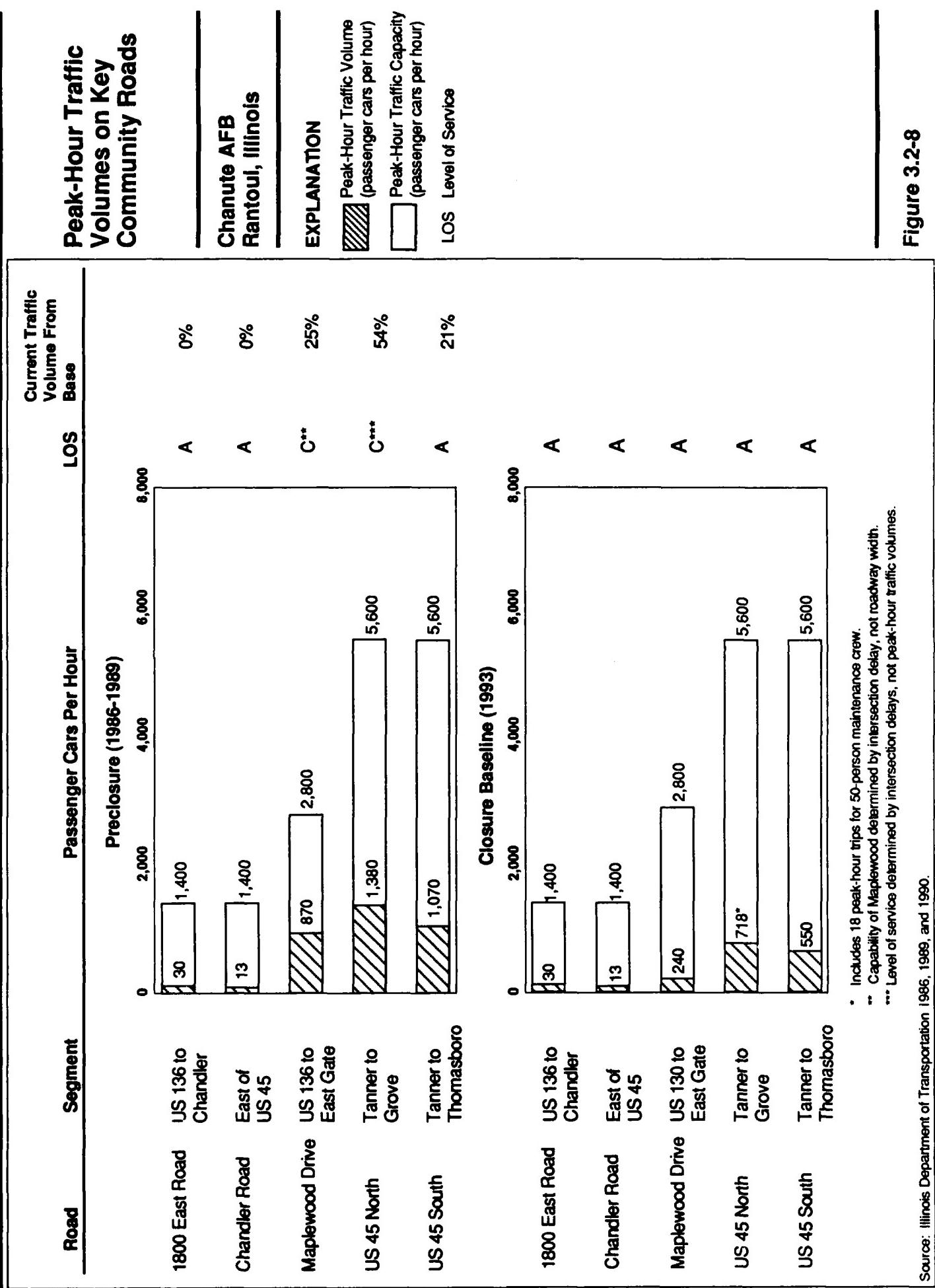


Figure 3.2-8



Traffic in the immediate Rantoul vicinity is controlled by signalized intersections at nine locations. Signals were also installed at the entrance to the presently unused West Gate of Chanute AFB, but have been removed. The three signals nearest the North Gate currently are estimated to provide service at LOS C or better, indicating satisfactory operations under current traffic conditions.

By 1993, peak traffic volumes on key community roads will be substantially reduced as a result of base closure. Because on-base residential trip sources and employment trip destinations will be almost entirely eliminated, peak traffic volumes on all key community roads except Township Road 1800 East and Chandler Road will decrease substantially (see Figure 3.2-8). Peak traffic volumes throughout the Village of Rantoul would also be reduced to some extent.

Chanute AFB. Access onto the base is currently gained through the North Gate and the East Gate. The North Gate, which connects Century Boulevard (U.S. 45) with Eagle Drive on base, is open 24 hours a day. The East Gate, which provides access to Maplewood Drive from the northeast housing and recreational areas, is open only during morning and evening rush hours.

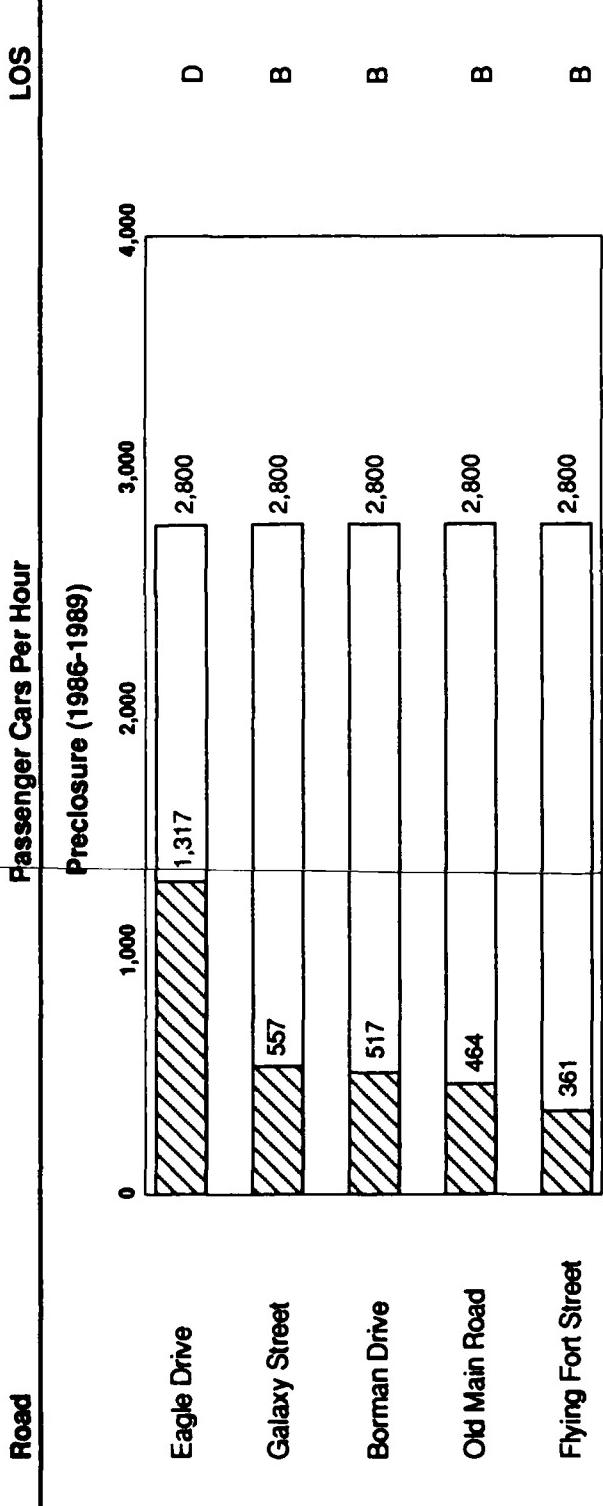
There are 40 miles of roads on the base, concentrated in the western one-third and northern edge of the base. Eagle Drive and Galaxy Street are the key north-south roads on the base; Borman Drive, Old Main Road, and Flying Fort Street are key east-west roads. Even prior to restriction of access through the East Gate, the greatest traffic volume on base was on Eagle Drive just inside the North Gate (greater than 1,300 vehicles per hour). There are no signalized intersections on the base.

The roads, which are maintained by the Air Force, are paved exclusively with bituminous concrete. These roads have been resurfaced frequently to repair damage caused primarily by climatic conditions; areas traveled by heavy trucks show no damage from overweight loads.

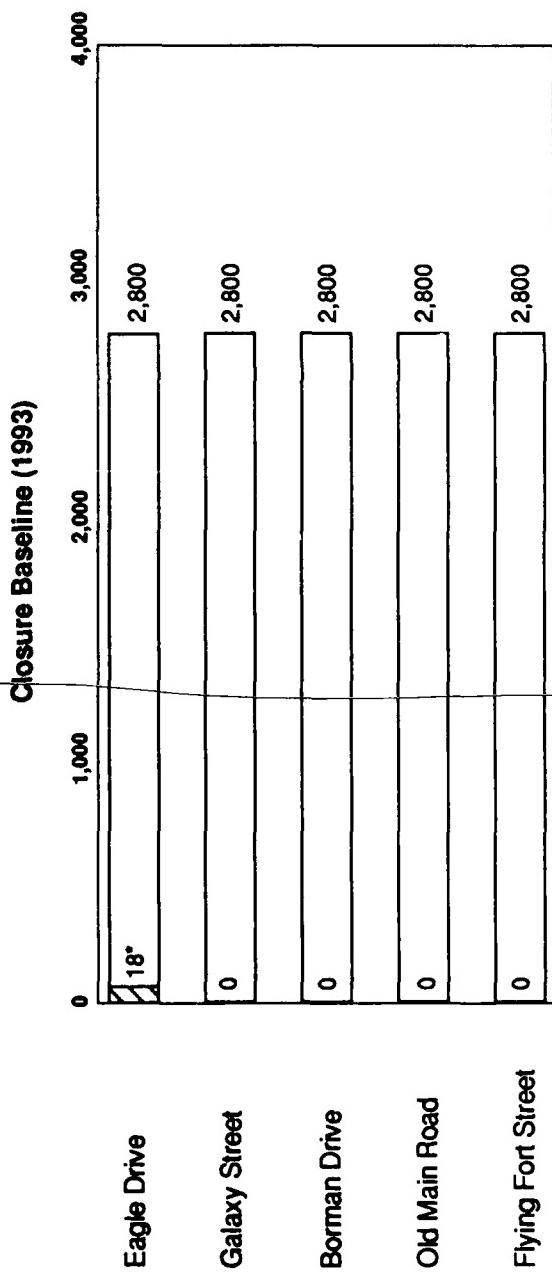
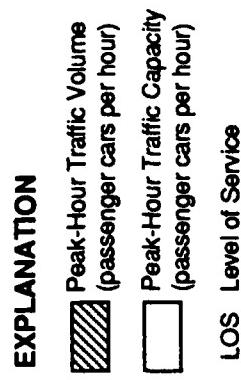
Figure 3.2-9 shows preclosure (1987) and closure (1993) peak-hour traffic volumes, capacities, and LOS for the five key on-base roads. Upon closure, there would be minimal traffic on on-base roadways because they would be used only by the 50-person disposal management team and others. Eagle Drive to U.S. 45 North would be the only access point.

3.2.4.2 Airspace/Air Traffic. The ROI considered for this airspace analysis is an area delegated to the Champaign Terminal Radar Approach Control (TRACON) facility by the Chicago Air Route Traffic Control Center. This area (Figure 3.2-10) extends from the surface to 10,000 feet above mean sea level (MSL), except in Area B to the northwest, which begins at 6,000 feet MSL. The Champaign TRACON is responsible for air traffic control services within the lateral and vertical boundaries of the ROI approach control area. This responsibility includes airport traffic as well as other air traffic transiting through this airspace.

Peak-Hour Traffic Volumes On Key On-Base Roads



Chanute AFB Rantoul, Illinois



- Upon closure Eagle Drive will be the main on-base road

Source: Transportation Engineering Agency, 1987

Chanute AFB
Rantoul, Illinois

Figure 3.2-9

Champaign Air Traffic Control Airspace

Chanute AFB Rantoul, Illinois

EXPLANATION

- — Airport Radar Service Area (ARSA)
- Approach Control Area
- ... Airways
- A Surface - 10,000 feet MSL
- B 6000 - 10,000 feet MSL
- X Runway

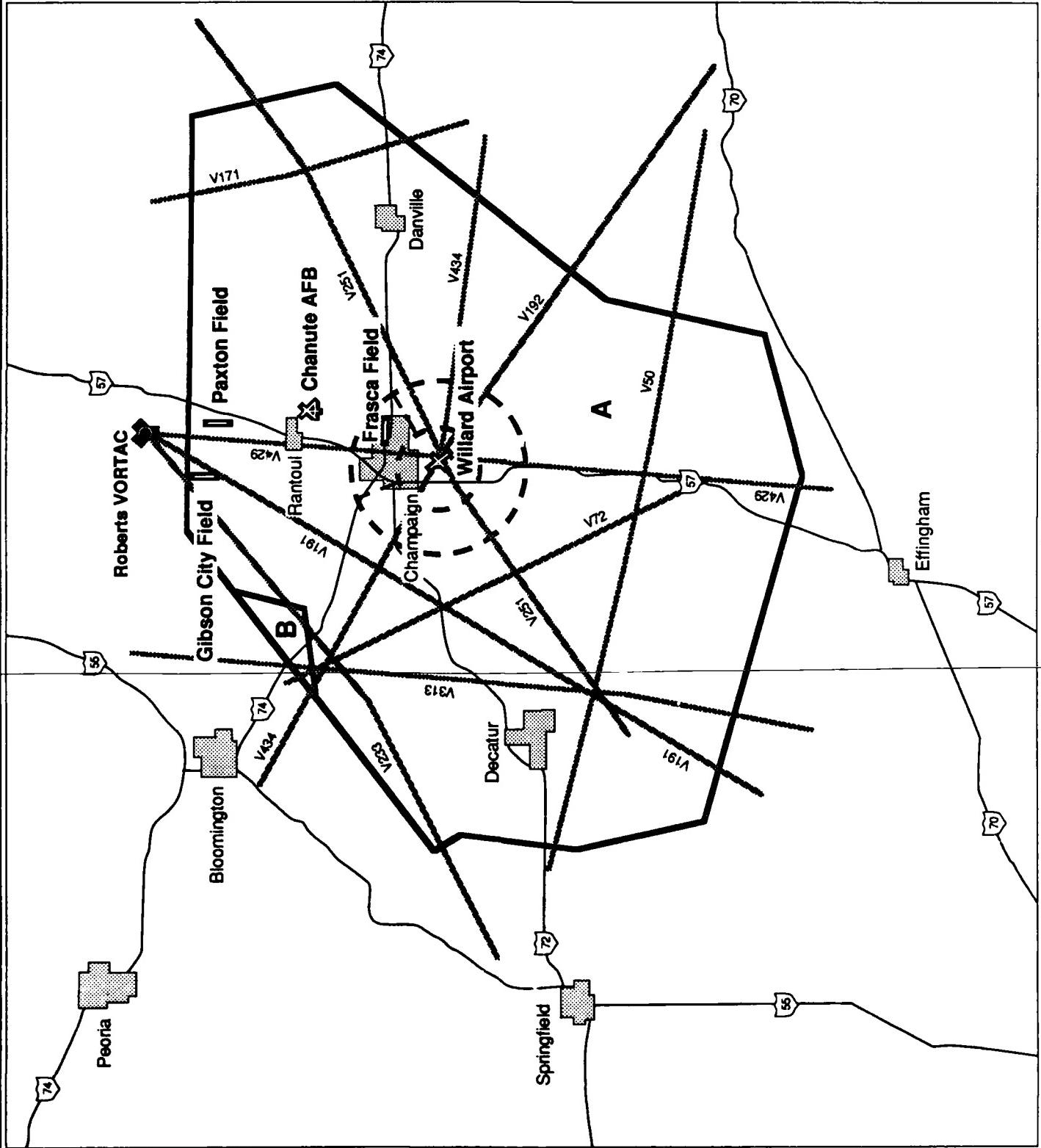


Figure 3.2-10

The airfield at Chanute AFB has been inactive since 1971. Helicopter and light civil aircraft operations are conducted at the base on a restricted-permission only basis and normally average only one or two flights a month. These flights are primarily conducted by the IDOT. Upon base closure, the limited number of aircraft operations at Chanute AFB would continue. There are no air traffic control facilities, navigational aids, instrument approaches, or designated airspace established at Chanute AFB. Roberts very high frequency omni-directional range tactical air control (VORTAC), a ground facility 20 statute miles north of Chanute AFB, provides course and distance information. Radar traffic advisories can be provided to aircraft operating at the base upon request from the Champaign TRACON. Four civil airports are located within the vicinity of the base (Figure 3.2-10); their current and projected annual aircraft operations are shown in Table 3.2-3. These projections are based on a 1-percent annual increase in flight operations.

Table 3.2-3. Existing and Projected Annual Aircraft Operations for Civil Airports in Vicinity of Chanute AFB

	Willard	Frasca	Paxton	Gibson City
1990	149,000	20,000	8,000	9,000
1993	153,500	20,600	8,300	9,300

Although several Federal airways transit the ROI, V-429 is the only one within the immediate vicinity of Chanute AFB (Figure 3.2-10). Airway V-429, which transits in a north-south direction west of the base (Figure 3.2-10), is utilized primarily by air traffic enroute between the Chicago airports and Champaign airport. The minimum altitude for instrument flight rules (IFR) traffic on the ROI portion of the airway is 3,000 feet MSL. Aircraft operations on this airway below 10,000 feet MSL average about six to eight flights per day, and are generally air taxi flights between the Champaign and Chicago airports. In 1993, air traffic on V-429 within the approach control airspace is expected to increase to 10 to 15 flights per day.

Overall, the volume of IFR and visual flight rules (VFR) aircraft operations within the ROI, both at the airports and in transit through this airspace, is low to moderate. Many of these operations are conducted by student pilots training at the University of Illinois-Willard Airport (Champaign). This training primarily consists of VFR flight in the local vicinity and touch-and-go training at the airport.

The closure baseline for the ROI airspace structure is expected to remain the same as existing conditions. There would continue to be no requirement for air traffic control or airport designated airspace at Chanute AFB. No other actions or significant airport development are anticipated within the Champaign approach control area or at any of the airports in the ROI that would change the existing conditions. Similarly, modifications to established airspace areas are

not normally required unless an action is so extensive and significant that changes are necessary to enhance safety and the control of air traffic. Such changes typically involve lateral and/or vertical adjustments to approach control areas.

There are several public and private airports within the Champaign approach control area. Only those at Champaign, Urbana, Paxton, and Gibson City are considered relevant to this study based on their proximity to Chanute AFB, level of aircraft operations, and the existence of instrument approach flight procedures at each of these airfields.

Willard Airport (Champaign), 20 statute miles south of Chanute AFB, is a fully operational airfield with a control tower, radar approach control, and navigational aids. An Airport Radar Service Area (ARSA) is established around the Willard Airport (see Figure 3.2-10). An ARSA is a regulatory type of airspace wherein mandatory air traffic control sequencing, separation, and traffic advisory services are required, as appropriate, for all IFR and VFR aircraft. The ARSA extends from the surface to 4,800 feet MSL within the inner circle, with outer segments extending from 2,400 feet and 2,800 feet, respectively, to 4,800 feet MSL. Chanute AFB lies outside of the ARSA; therefore, air traffic in the vicinity of the base is unaffected by the mandatory requirements of this airspace area.

Other designated areas at Willard include an airport traffic area (control tower operative airspace) and a charted control zone and transition area, which protect airspace for ILS and very high frequency omni-directional range (VOR) approach procedures. This airport has three active runways and primarily serves six commercial air carrier services and general aviation aircraft, including those associated with the University of Illinois training activities.

Frasca Airfield (Urbana) is a general aviation airfield 11 statute miles south of Chanute AFB and 8 miles northeast of Willard Airport. This is a low-volume airfield with no air traffic control facilities. Champaign TRACON provides radar air traffic control services to Frasca and a VOR Instrument approach is established to the airfield. Protective airspace for this approach is provided by a charted control zone and transition area.

Paxton Field, 10 statute miles north of Chanute AFB, is primarily a general aviation airfield. Air traffic control services are available only through the Champaign TRACON and a VOR approach is established, as well, to this airport. A control zone and transition area also encompass this airfield.

Gibson City Airport is 15 statute miles northwest of Chanute AFB and has a VOR approach, an associated control zone and transition area, and no air traffic control facilities. Champaign TRACON also provides approach services to this general aviation airfield.

As indicated above, the Champaign TRACON provides approach control services to the airports within its delegated airspace. Therefore, although the VOR approaches to each airport may not conflict, the TRACON is responsible for and has the capability to ensure that aircraft operating simultaneously on these approach courses are properly separated from one another.

3.2.4.3 Air Transportation. Air transportation includes passenger travel by commercial airline and charter flights, business and recreational travel by private (general) aviation, and priority package and freight delivery by commercial and other carriers. Commercial passenger service is available in the region from the University of Illinois-Willard Airport, approximately 20 miles southwest of Chanute AFB. The airport is owned and operated by the University of Illinois. Six airlines provide direct service from Champaign to Chicago, Dayton, Indianapolis, Miami, and St. Louis. In 1988, the airport processed 177,000 enplaned passengers and 157,900 total operations (Coffman Associates, 1989). It is estimated that about 9 percent of the total number of passengers serviced by the airport in 1988 were directly related to Chanute AFB. Upon closure, the base would contribute few passengers to the Willard Airport.

General aviation facilities are also available at Frasca Field in Urbana and at Paxton Field in Paxton. Because the primary market for air transportation service is the Champaign-Urbana metropolitan area, only minor changes, if any, in the availability of services or facilities are expected to result directly from base closure.

3.2.4.4 Light Emissions. Upon closure, there will be no major sources of light emissions at Chanute AFB that will interfere with operations or vehicular travel. As previously discussed, no visual guidance systems are currently in operation on the existing runways at Chanute AFB.

3.2.4.5 Railroads. Illinois is served by approximately 8,300 miles of railroad track (the greatest mileage of any state except Texas) and more than 40 railroad companies (Rand McNally, 1985). Chicago, historically the nation's largest hub for railroad services, lies approximately 120 miles north of Chanute AFB and Rantoul. The nearest connection to the south is at Champaign-Urbana.

A main north-south line of the ICR between Centralia and Chicago parallels U.S. 45 and passes immediately west of Chanute AFB, traversing western Rantoul. This line provides both freight service and AMTRAK passenger service. Two AMTRAK trains per day each way provide daily passenger service at the Rantoul Station (AMTRAK, 1990). By 1993, no change in local or regional rail service availability is expected as a direct result of base closure.

A spur from the ICR enters Chanute AFB near the base's northwest corner in the vicinity of the North Gate; the spur extends for approximately 0.6 mile eastward along the northern base boundary. Although the spur is not currently in use, it was inspected by representatives of the ICR on 13 July 1990 (Illinois Central

Railroad, 1990). The trackage inside the gate was found to be in excellent condition and able to handle any axle loading required. The Trailer-On-Flat-Car ramp was also deemed in excellent condition and ready for immediate use.

3.2.5 . Utilities

The utility systems addressed in this EIS include the facilities and infrastructure used for:

- Potable water pumping, treatment, storage, and distribution
- Wastewater collection and treatment
- Solid waste collection and disposal
- Energy generation and distribution, including electrical energy and hydrocarbon fuels (e.g., coal and natural gas).

The ROI for utilities includes systems serving Chanute AFB as well as the surrounding community in Rantoul. The major attributes of utility systems in the ROI are processing and distribution capacities, storage capacities, average daily consumption, peak demand, and related factors required in making a determination of the adequacy of such systems to provide service in the future.

3.2.5.1 Water Supply. The Village of Rantoul and Chanute AFB presently have independent water supply systems. Rantoul previously supplied the base with potable water, and the supply lines to the base are still in existence, although normally closed and unused except in response to emergencies. Total annual water production over the past 5 years for Rantoul and Chanute AFB and a projection of annual water production from 1991 to the time of closure are shown in Figure 3.2-11. The projection assumes that water use declines in proportion to the reduction in population, both on Chanute AFB and in Rantoul.

Rantoul. The water treatment and distribution system of Rantoul provides potable water throughout the Village of Rantoul. The treatment facilities (Village of Rantoul Water Treatment Plant) are in the western part of the Village, west of the ICR tracks and north of U.S. 136. The primary source of water is five deep wells, three on the treatment plant property and two others to the southwest along U.S. 136.

The water treatment plant has a design capacity of 3.2 MGD, and the system includes a storage capacity of 1.5 million gallons. Input raw water is aerated, treated, filtered, fluoridated, chlorinated, and then distributed or stored. Except for iron, input water quality meets drinking water standards, and iron is reduced to negligible levels in the treatment process. Illinois Public Water Supply standards meet or exceed federal primary standards issued by the Environmental Protection Agency (EPA). Data for the water year ending September 1990 indicate an average potable water delivery from the plant of 1.2 MGD, corresponding to a reserve capacity of 2.0 MGD. Monthly averages of maximum and minimum daily consumption for that period were 1.4 and 1.1 MGD, respectively.

Rantoul and Chanute AFB Treated Water Production

Chanute AFB
Rantoul, Illinois

EXPLANATION

- Chanute AFB
- Rantoul
- Chanute AFB and Rantoul
- Chanute AFB Forecast
- Rantoul Forecast

Average Daily Water Production

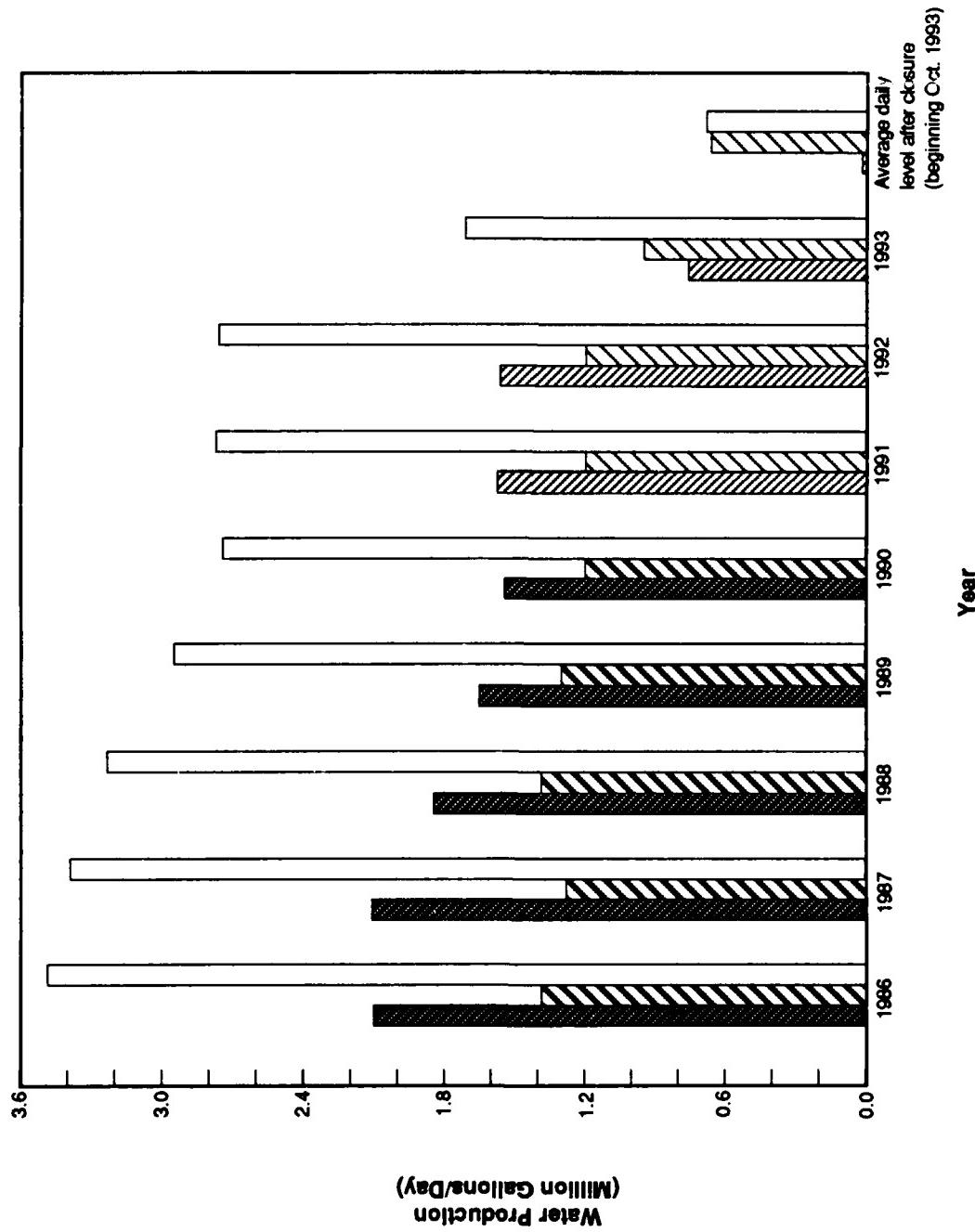


Figure 3.2-11

The potable water system is expected to be unchanged in 1993. No modifications in plant equipment or changes in staffing are planned. Mutual aid emergency support from the Chanute AFB water system is expected to remain available if, as planned, that system remains in service upon base closure.

Chanute AFB. Chanute AFB's water treatment and distribution system consists of three distinct but interconnected subsystems, each with its own source, treatment facility, elevated storage, and distribution network. Water is pumped from nine water wells on base, each rated at 500 gallons per minute (gpm). The wells are 12 inches in diameter and range in depth from 275 to 290 feet. Seven wells with 40-horsepower (hp) submersible pumps, and two wells with 40-hp turbine pumps serve the system. Water treatment for the system serving the industrial area of the base (primarily the buildings with numbers in the 900s) and providing irrigation water for the golf course consists of chlorination (for disinfection) only. Water treatment for the other two systems includes aeration and pressure filtration, zeolite softening, fluoridation, and ionization. These systems supply all other areas of the base.

The three water treatment plants have nominal capacities of 845, 2,786, and 1,000 gpm. The corresponding daily rates are estimated at 1.01, 3.34, and 1.44 MGD, assuming 20 hours of daily operation for the first two systems and 24 hours of operation for the third with both pumps operating (EDAW et al., 1990). The corresponding total capacity of approximately 5.8 MGD is more than adequate to supply the average daily use of about 2.2 MGD, which has ranged from about 1.3 to 3.9 MGD in recent years. Base water use is also subject to substantial seasonal variations.

Four elevated water storage tanks are in service on the base. Conditions and capacities are shown in Table 3.2-4.

Table 3.2-4. Water Storage Tank Characteristics

Facility Number	Capacity (Gallons)	Year Built	Current Condition
120	500,000	1940	Good
122	1,000,000	1958	Good
44	300,000	1942	Fair
968	<u>300,000</u>	1954	Good
Total Capacity	2,100,000		

Source: EDAW et al., 1990.

All of the elevated tanks have reportedly deteriorated as a result of corrosion. Elevated tank 120 is equipped with cathodic protection. Major renovations to elevated tank 44, including a new roof, would be required if the tank is to remain in useful service for the next 20 years or more. None of the elevated tanks have heating systems to prevent the water from freezing.

The water distribution system consists of approximately 150,000 linear feet of 4- to 12-inch mains throughout the base. The system is looped for proper distribution. Ten-inch water mains around the hangar area and weather building provide adequate fire flows to those areas. The system serving the 900 area and the golf course is connected to the two others by an 8-inch main running on the northeast side of the golf course. This system, including its wells, water mains, pumping facilities, and elevated tank can be disconnected and taken out of service without a major disruption to the other two systems. The system is in good condition and provides adequate service to all parts of the base.

Present water supply, treatment, and distribution facilities are more than adequate to meet present needs on base. Water quality on base is good. Conventional water softening techniques presently in place are efficient and provide a quality product. If required, the present well system on base is capable of producing about 6.5 MGD with all nine 500-gpm wells operating. Wells can be operated intermittently on an as-needed basis without affecting the integrity of the equipment.

Because the base was developed for single-ownership operation, the distribution system is not consistently located within designated utility corridors, a condition that applies generally to all utilities. Presently, none of the water usage is metered at any building or facility. Many of the larger buildings likely have several points of connection to the distribution system. Water availability for routine and emergency services should remain relatively unaffected by base closure, although consumption will be sharply reduced, and it is possible that one or more wells would be closed. Water use at Chanute AFB at the time of closure is assumed to be 15,000 gallons per day (gpd), based on use by an estimated 50 persons for a variety of maintenance and support activities.

3.2.5.2 Wastewater Treatment. Although Chanute AFB historically has maintained its own wastewater treatment facilities, since 1988 the base's wastewater has been processed at the Rantoul WWTP. The two treatment plants on the base are being maintained, but are not operating. The Air Force contributed approximately 10.5 million dollars to the construction of the WWTP. The Air Force retains no part of ownership or control in return for its contribution, but pays at a reduced rate for use of the WWTP. Historic and projected wastewater treatment for Rantoul and Chanute AFB are shown in Figure 3.2-12. By the end of 1993, wastewater flow from the base is assumed to be 55 percent of the average historic flow (from 1986 through September 1990), mainly consisting of inflow/infiltration.

Rantoul. The wastewater collection system for the Village of Rantoul has approximately 198,700 feet of sewer. The original sewer network, constructed around 1940, accounts for approximately one-third of the existing system. The original system was constructed of clay pipe using oakum-mortar joint material, and was tributary to the old treatment plant. The system has been continuously expanded by the Village and private developers. In 1954, the 30-inch diameter Southside Interceptor and the Eastside Treatment Plant were constructed, and

Rantoul and Chanute AFB Wastewater Treatment

Chanute AFB
Rantoul, Illinois

EXPLANATION

- Chanute AFB
- ▨ Rantoul
- Chanute AFB and Rantoul
- ▨ Chanute AFB Forecast
- ▨ Rantoul Forecast

Average Daily Wastewater Treatment

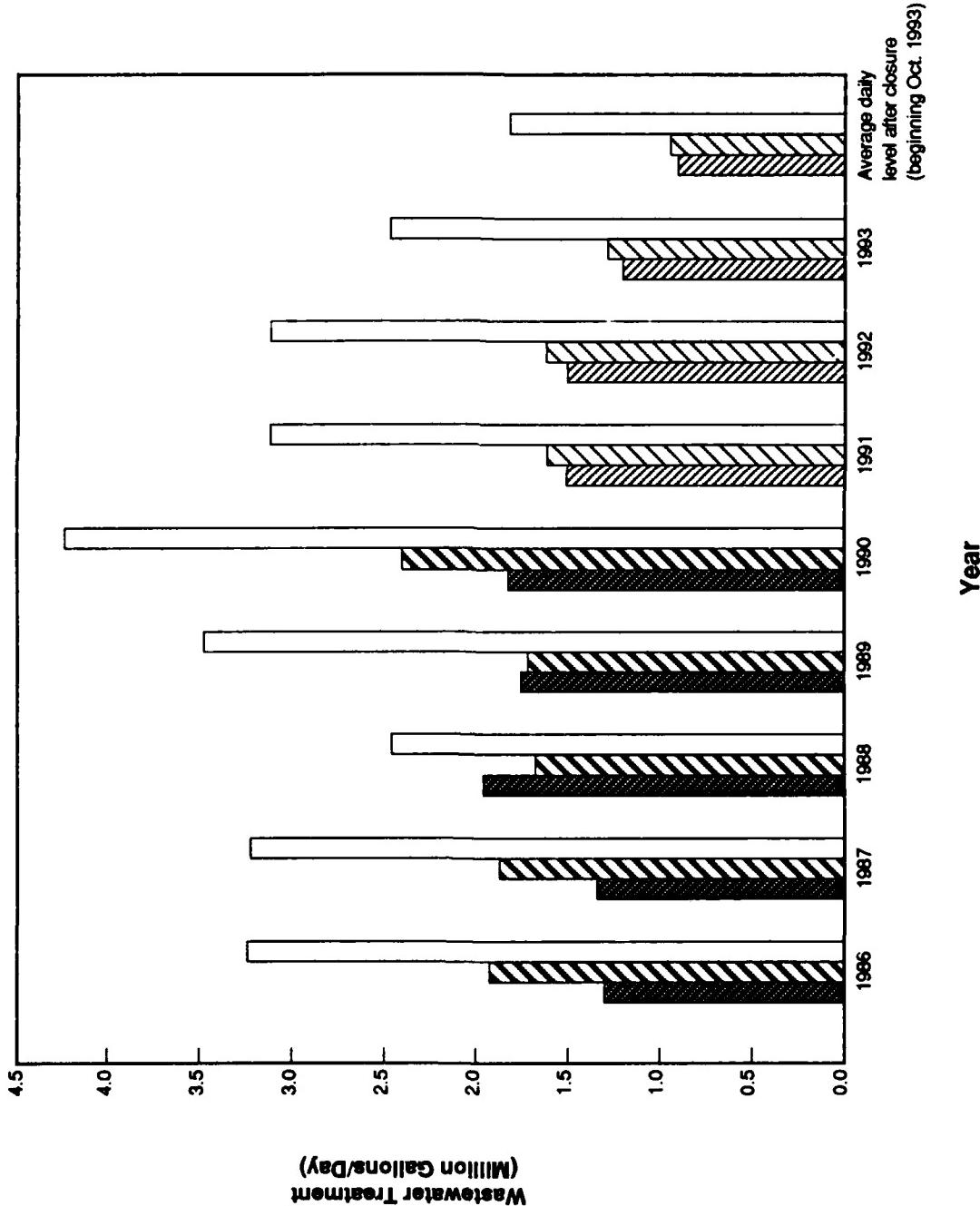


Figure 3.2-12

the old treatment plant was abandoned. The Northside Interceptor was constructed in 1965 and the Westside Interceptor in 1968.

The Rantoul wastewater collection system is expected to be unchanged by the end of 1993. Some flow reduction is anticipated as a result of base closure, but the effects should be spread throughout the system. No area of the wastewater collection system is anticipated to be affected to a point at which changes in operation or maintenance would be required. Influent to the WWTP is subjected to heavy particle (grit) removal, larger particles are reduced in size, settleable solids and floatable greases are separated in primary clarifiers, and the primary effluent is routed to secondary treatment in packed towers. There, microorganisms reduce the biochemical oxygen demand of the primary effluent to acceptable levels. The effluent is then settled, filtered through rapid sand filters, chlorinated, and discharged into a man-made drainage ditch, an unnamed tributary of the Upper Salt Fork Drainage Ditch. The man-made receiving ditch is classified as a stream with a 7-day, 10-year low flow of zero. Therefore, the plant effluent must meet stream standards. Operation consistently meets the requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued for the Rantoul WWTP. Ultimate discharge is to the Vermilion River. Solid waste (sludge) from the process is digested and/or dewatered and landfilled. There is considerable duplication of facilities in order to provide adequate processing capacity.

Because of infiltration/inflow conditions in the collection systems feeding the plant, inflows exceed plant capacity during storm and other severe wet-weather conditions. The plant consequently is provided with a storm water diversion structure and storm water lagoon, where wastewater is stored temporarily before being removed and processed when inflows fall within normal ranges. A 1978 infiltration/inflow analysis for the Village proper concluded that elimination of infiltration/inflow was not cost effective.

Some types of contaminants can pass through a conventional treatment plant virtually unchanged, whereas others can cause major disruptions in plant operation. To prevent such undesirable conditions from arising, both federal and State of Illinois regulations require pretreatment of the effluent by a wide range of specified processes. Operators of publicly-owned treatment plants must establish a monitoring program to ensure that the undesirable materials are not discharged into the wastewater stream and that required pretreatment standards are being met. To prevent deterioration in effluent quality or damage to the treatment process (system upset), the Village of Rantoul has established and enforces a Sewer Use Ordinance that establishes pretreatment and monitoring requirements for wastewater discharges into the system.

Base closure may result in reductions in the amount of influent wastewater received by the Rantoul WWTP. Data for 1990, the latest year of record, show an overall daily average flow of 4.2 MGD to the plant; of this flow, 2.4 MGD was contributed by Rantoul and 1.8 MGD (43 percent) was contributed by Chanute AFB. A substantial amount of this average flow represents contributions from

inflow/infiltration, which can contribute 60 percent or more of the flow during heavy rains. Over the same 1-year period, the daily flow contributed to the WWTP by the Village of Rantoul, averaged over one month, varied from a low of 1.0 MGD to a high of 3.7 MGD. It is expected that base closure without reuse would result in the loss of about 50 percent of the average daily flow (U.S. Air Force, 1990c).

The overall average flow of 4.2 MGD for FY 1990 was high, largely because this was the second wettest rainy season on record. Without the increased infiltration/inflow contributed by the rains to the wastewater flow, the WWTP and its collection system would have experienced low flow problems. The Rantoul WWTP was placed in service in 1988. It is located immediately north of Grove Avenue at the eastern Village limit. The Rantoul WWTP currently serves the corporate area of the Village of Rantoul including Chanute AFB. It had an original design capacity of 4.33 MGD Average Daily Dry Weather Flow and 8.65 MGD Peak Daily Dry Weather Flow. The WWTP was expected to receive 3.0 MGD initially with a reserve capacity of 1.33 MGD for growth; however, the WWTP and its collection system have not operated efficiently at flows below the levels of 1990. With no change in population, the WWTP is in need of improvements to efficiently treat the wastewater flow. Prior to 1993, temporary minor adjustments and a higher degree of maintenance than is commonly necessary may be required to provide adequate treatment of the reduced influent flow reliably and economically, and without violation of any applicable regulations. The specific steps necessary to achieve this end are being evaluated. In the ROD on the base closure EIS (U.S. Air Force, 1990d; see Appendix B), the Air Force committed to help in the process.

Chanute AFB. Wastewater generated by activities on Chanute AFB is collected by a system comprising approximately 139,000 linear feet of sanitary sewers, and is then routed to the Rantoul WWTP for treatment and disposal. Because of the relatively level topography on base, force mains as well as gravity sewers are required, and the system includes 24 pump stations for this purpose. (A force main is a system in which wastewater is accumulated in a "wet well" and is then pumped into a sewer line. Such systems provide service where gravity flow is not feasible.) Most of the collected wastewater is pumped to the treatment plant through a 20-inch-diameter force main that starts at Eagle and Heritage drives, goes east toward the base boundary, then north to the Rantoul WWTP. Some wastewater generated by the housing area at the northwest part of the base reaches the WWTP by gravity flow.

There are two unused (since 1988) wastewater treatment plants on base. One of these plants is in the industrial area in the southeast part of the base, the other is at Eagle and Heritage drives. The main pumping stations of the force-main system are located at these plant sites. Some wastewater generated on base must pass several lift stations before reaching one of these main stations. The on-base collection system is subject to infiltration/inflow, a condition common to systems of its age in central Illinois (EDAW et al., 1990).

3.2.5.3 Solid Waste. Solid waste from the Village of Rantoul and Chanute AFB currently is disposed of in a landfill operated by the Village. This landfill is in a hilly area approximately 3 miles northeast in Ludlow Township, immediately west of the Ludlow/Hardwood Township border. The natural geology of this area provides a clay soil bottom liner more than 50 feet thick, providing a barrier between the landfilled wastes and local groundwater. The facility is designated as a Class II landfill, suitable for the disposal of non-hazardous and general municipal waste. It was placed in service in 1969, and was first permitted by the Illinois EPA (IEPA) in 1975. No Illinois-classified special waste or construction debris is accepted at the landfill. Construction debris has been accepted on a case-by-case basis, but is generally prohibited because of volume. Asbestos-containing debris cannot be accepted by the Rantoul landfill, because it is classified as a special waste. It has not been previously permitted, and cannot be permitted now because of the restrictions of the Illinois Solid and Special Waste Management Regulations, which prohibit new special waste streams.

Private haulers serve a total of approximately 35,000 individual customers in the area, who currently generate approximately 95,000 cubic yards of waste per year. Chanute AFB contributes approximately 30 percent of the total wastes. A composting program was begun in 1988, and a recycling program is currently in place. The Village of Rantoul has indicated that it would not accept packing, crating, and other wastes generated from Chanute AFB related to its closure/moving activities during the next few years.

In March of 1991, and in accordance with recent revisions in Illinois EPA regulations, the Village of Rantoul notified the Illinois EPA of its revised available capacity estimates for the Rantoul Municipal Landfill and of its intent to close the site by April 1995. Additionally, Rantoul has indicated that it does not currently plan to expand the Rantoul landfill onto a 63-acre site that is adjacent to the existing landfill and owned by the village. Champaign County is presently planning to site a new landfill that could accept Rantoul's solid wastes that would be operational by 1995. If the county landfill is not available at the time of closure of the Rantoul landfill, Rantoul's wastes would likely be transported to the H&L Disposal Company #3 landfill, the closest facility to Rantoul, located in Danville, in adjacent Vermilion County. This landfill has a remaining capacity, as of 1 April 1990, of 6.5 million cubic yards and was expected to have a 10-year remaining life, based on its 1990 disposal rate of 678,817 cubic yards (Illinois Environmental Protection Agency, 1990a).

At base closure, solid waste generation will decrease approximately 38 percent. At that time, an estimated 51,000 cubic yards of waste per year will be generated. The estimated volume of waste generated from the Rantoul service area after base closure (i.e., 51,000 cubic yards per year) would represent approximately 0.8 percent of the 1990 remaining capacity of the H&L landfill and a 7.5 percent increase over its 1990 disposal rate. Figure 3.2-13 shows the historic and projected amounts of solid waste disposal from the present service area of the landfill.

**Rantoul and
Chanute AFB
Annual Solid
Waste Disposal**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- Chanute AFB
- Rantoul
- Chanute AFB and
Rantoul
- Chanute AFB Forecast
- Rantoul Forecast

Annual Solid Waste Disposal

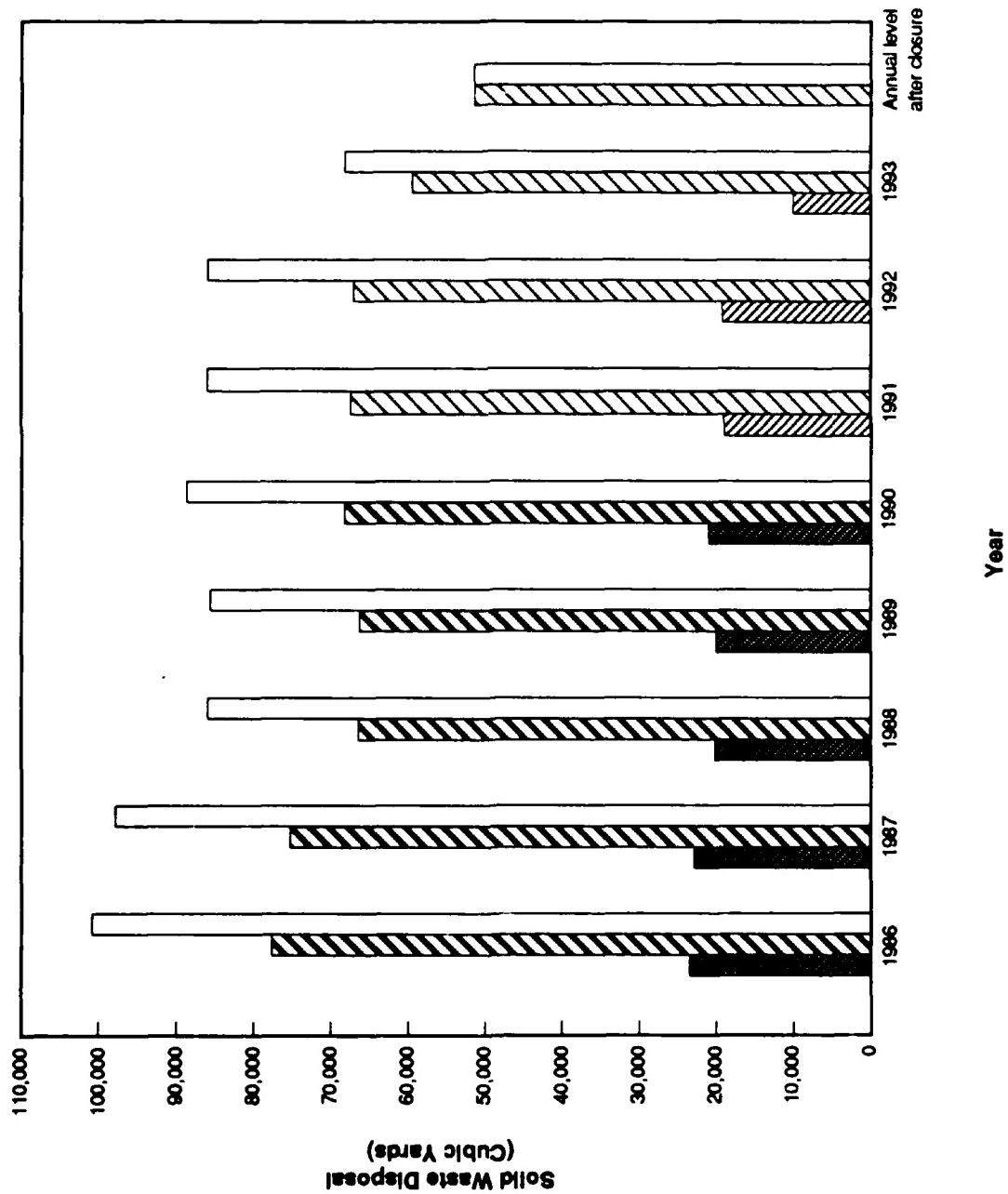


Figure 3.2-13

3.2.5.4 Energy. Historic energy consumption of electricity, natural gas, and coal by the Village of Rantoul and Chanute AFB, as well as at-closure projections of consumption are indicated in Figures 3.2-14, 3.2-15, and 3.2-16. Projections assume reductions in use in proportion to reductions in population, both on Chanute AFB and in Rantoul.

Electricity. The Village of Rantoul operates its own power distribution and generating facility. Most of the distributed power is derived from Rantoul's membership in the Illinois Municipal Electric Authority (IMEA), which purchases power from privately owned utility companies and distributes it to its member utilities over leased lines. The Village currently has contracts with the IMEA for the supply of all power needs through the year 2020. The present transmission lines and feeders to the Village have a capacity of 50 megawatts (MW). The historical peak demand has been 26 MW, so nearly 100 percent reserve against peak demand is available. In addition, the feeder capacity can be doubled within 6 months, if needed. The power suppliers have excess capacity, and the IMEA has just purchased a 60-MW share of a new power plant.

In addition to purchased power, the Village has a rated peak generating capacity of 13.5 MW, through the use of eight diesel-powered generators. The contract with IMEA requires that these units be available within 30 minutes notice, and they are maintained at that readiness at all times. In recent years, they have not been used for actual delivery of electrical power to the load, because the cost of purchased power is less than the cost of generation by the Village.

Chanute AFB receives electrical service from the Central Illinois Public Service Company (CIPS), which is also one of the source agencies for the Village of Rantoul. The area is served by a 138-kilovolt (kV) transmission line capable of carrying more than three times the present load. A 69-kV transmission line extending from the CIPS Rantoul substation terminates at an Air Force-owned substation next to the north gate. The total capacity of the base substation is 35,000 kilovolt-amperes (kVA). Electrical power is distributed throughout the base by 13 primary feeders. Base peak power demands over the past several years have been in the range of 14,000 to 17,000 kVA. The distribution system is adequate for present loads, and the substation has excess capacity in the range of 20,000 kVA over present demand (EDAW et al., 1990). Electrical use on Chanute AFB typically peaks during the summer months when about 7,000 megawatt-hours (MWH) are consumed monthly.

Natural Gas and Coal. Most heating on the base is provided from two heating plants, supplemented by use of natural gas or No. 2 fuel oil to heat individual buildings. Some small buildings are heated by electricity. The central heating plant (Building 46), erected in 1939, serves the northwest section of the base (excluding housing units in the area), hospital, dental clinic, child development center, and other buildings between the hospital and the mobile home park. The central plant is coal fired, and consumes an average of about 140 tons per

Rantoul and Chanute AFB Electricity Consumption

Chanute AFB
Rantoul, Illinois

EXPLANATION

- Chanute AFB
- Rantoul
- Chanute AFB and Rantoul
- ▨ Chanute AFB Forecast
- ▨ Rantoul Forecast

Average Daily Electricity Consumption

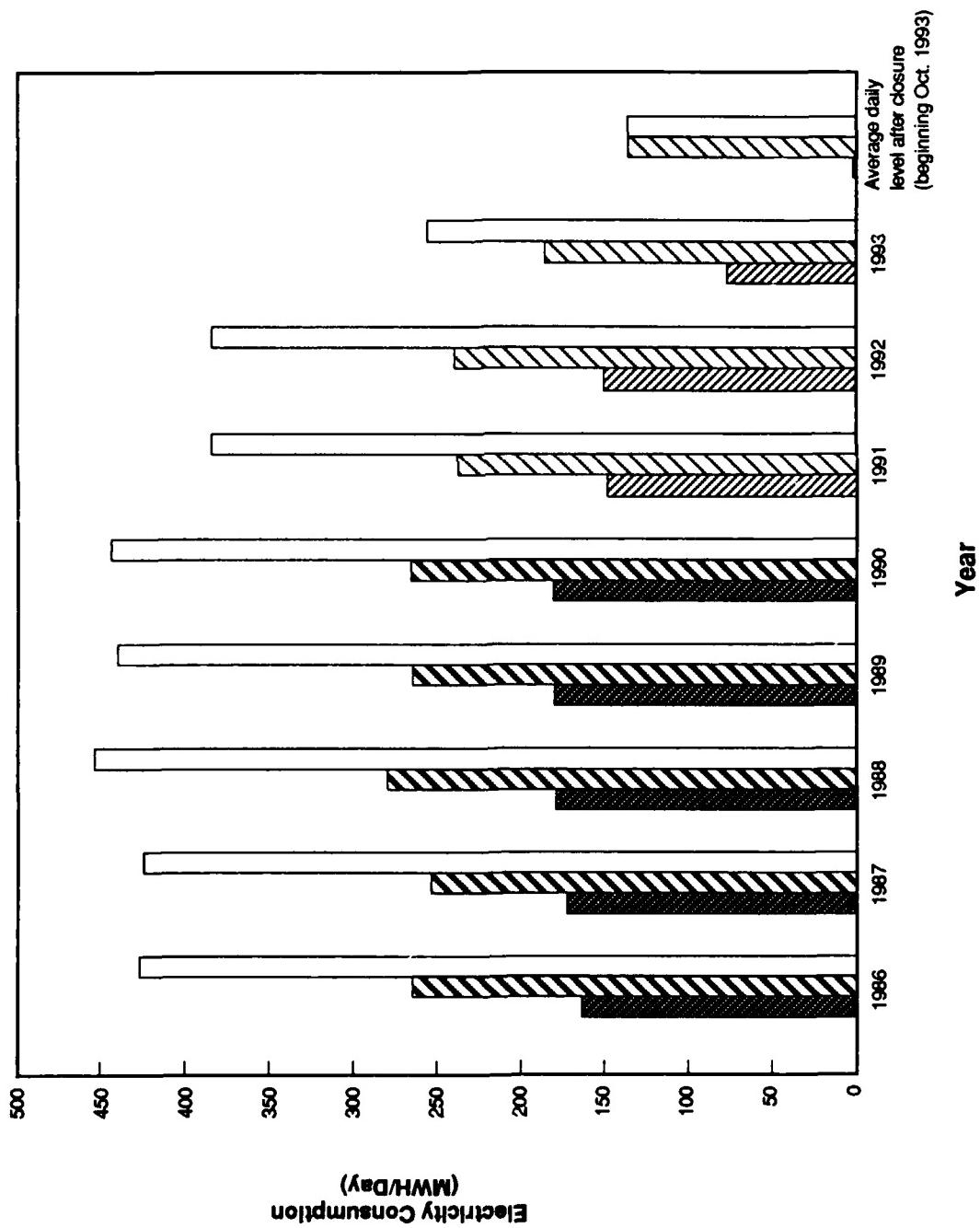


Figure 3.2-14

Rantoul and Chanute AFB Natural Gas Consumption

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- Chanute AFB
- ▨ Rantoul
- Chanute AFB and Rantoul
- ▨ Chanute AFB Forecast
- ▨ Rantoul Forecast

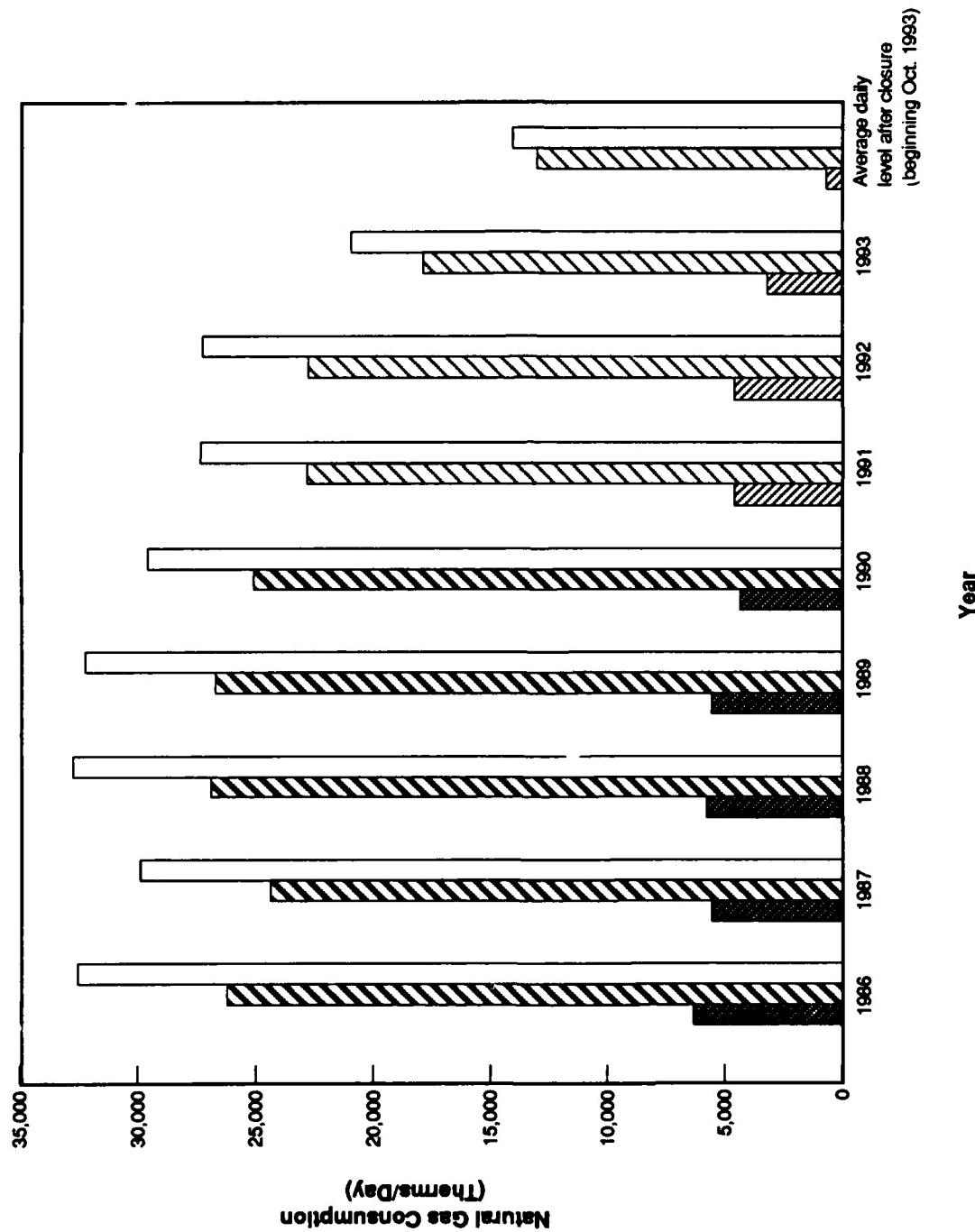
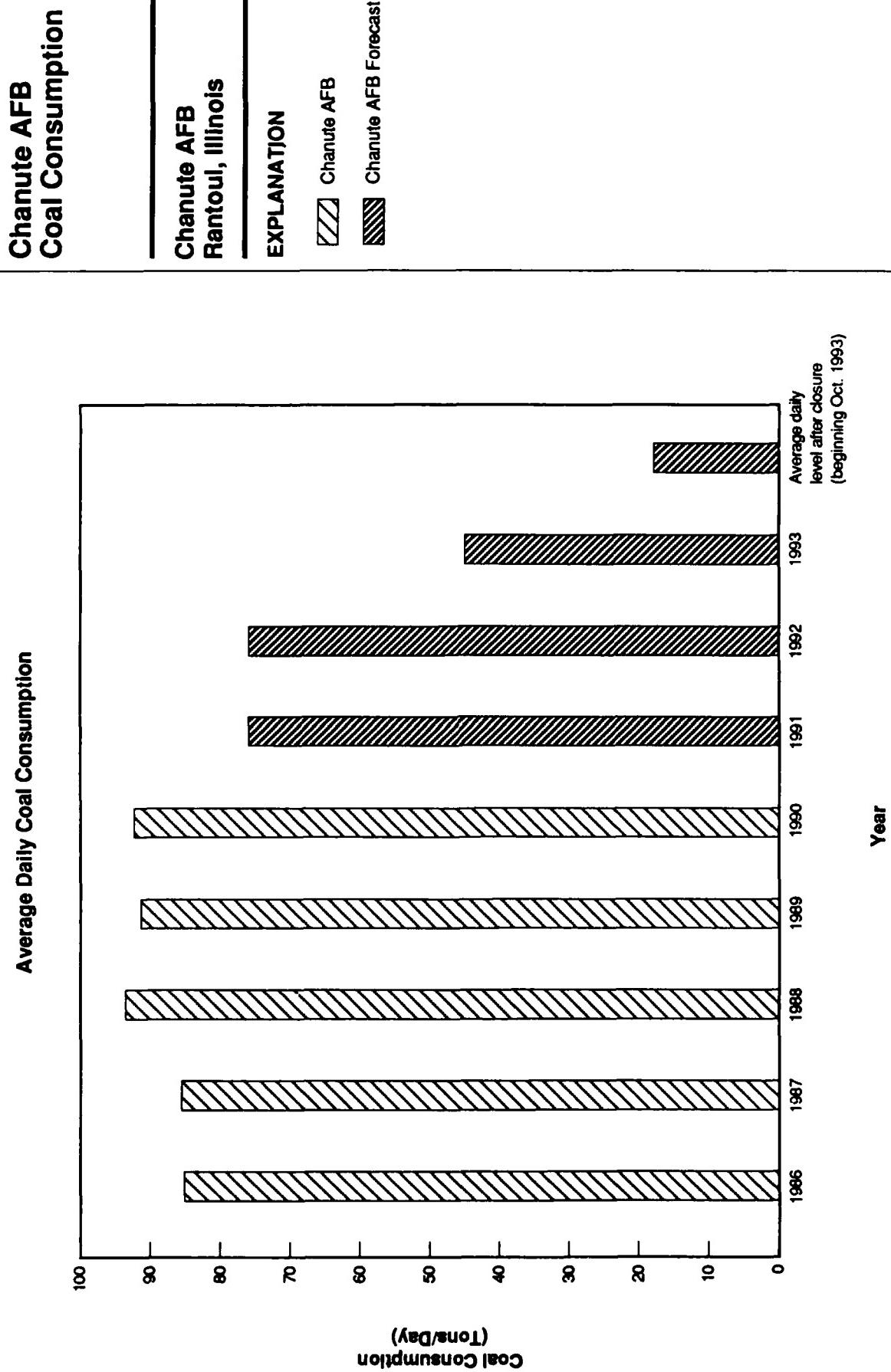


Figure 3.2-15

Figure 3.2-16



day of low-sulfur coal during the winter, and 70 tons per day during the summer. Coal is delivered by truck from southern Indiana.

The second heating plant is in Building 998, in the southeast area of the base. This facility is gas fired, but it can also operate on No. 5 fuel oil. It was erected in 1950, and serves several buildings in the 900 area.

Natural gas is supplied to the base and the Village of Rantoul by the Northern Illinois Gas Company (NIGC), which maintains both 4- and 6-inch high-pressure mains. Mains outside the base are owned and operated by NIGC. On-base mains are owned and operated by the Air Force, and are in good condition. Gas supplies are adequate to provide service for the entire base (EDAW, et al., 1990).

Most natural gas and coal use on the base takes place during the winter, and is primarily associated with space heating requirements. The steam plant does operate during the summer months to provide air conditioning and hot water to some of the dormitory facilities. The plant's overhead bunker facilities, which convey the coal down into the boiler stokers, the boiler stokers themselves, and the air pollution scrubbers show a large amount of wear and tear and would be expected to require continuing maintenance attention. The remaining portions of the steam plants are in relatively good condition and have been well maintained.

The consumption of electricity at Chanute AFB would be negligible by late 1993; minor electrical demand may be required for security lighting. Minimal space heating would be required at closure to maintain temperatures of about 40°F in buildings during winter months. This was estimated to require approximately 20 percent of normal demand for natural gas and coal.

3.3 HAZARDOUS MATERIALS/HAZARDOUS WASTE MANAGEMENT

Hazardous materials and hazardous waste management activities at Chanute AFB are governed by specific environmental regulations. For the purposes of the following analysis, the term hazardous waste or hazardous materials will mean those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC §§ 9601-9675, and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 USC §§ 6901-6992. In general, this includes substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics may present substantial danger to public health or welfare or the environment when released into the environment. The ROI encompasses all geographic areas that are exposed to the possibility of a release. The ROI for IRP sites is within the existing base boundaries. Specific geographic areas affected by past and current hazardous waste operations, including cleanup activities, are presented in detail below.

3.3.1 Hazardous Materials Management

Preclosure Reference. *Chanute Technical Training Center Plan 705* (U.S. Air Force, 1988) addresses the storage locations of hazardous materials and response to spills. Chanute AFB has a program that identifies the hazardous materials that are shipped to the base and utilized in the workplace.

Closure Baseline. After closure, only the disposal management team and possible interim users will be using hazardous materials. All parties will be responsible for managing these materials in accordance with federal, state, and local regulations; for protecting their employees from occupational exposure to hazardous materials; and for protecting the public health of the surrounding community.

The disposal management team will be responsible for the safe storage and handling of all hazardous materials used in conjunction with base maintenance, such as paint, paint thinner, solvents, pesticides, herbicides, and fungicides. These materials will be shipped to the base in compliance with Department of Transportation (DOT) hazardous materials regulations. If the Air Force authorizes interim use of base facilities prior to reuse and disposal, it will require that all hazardous materials be shipped, stored, and handled in compliance with pertinent regulations.

3.3.2 Hazardous Waste Management

Preclosure Reference. As a result of an RCRA Part A permit application submission, Chanute AFB operates as an interim status Hazardous Waste Storage Facility under an IEPA permit that authorizes on-site storage within a designated area for up to 1 year. In view of the pending closure of the base, the RCRA Part B permit application was withdrawn from submission to the IEPA. As a result, the facility will lose its interim status as a storage facility on 8 November 1992, prior to base closure. After that time, all hazardous waste must be removed from the installation within 90 days of collection. Once the storage area loses interim status, it must be closed properly within 180 days of receiving the final volume of hazardous waste, or after approval of the closure plan, whichever is later, unless the appropriate regulatory agency, i.e., IEPA, grants an extension.

Chanute AFB currently operates one interim status hazardous waste storage facility, four 90-day accumulation points, and fourteen satellite accumulation areas (Table 3.3-1). The sources that generate hazardous waste are presented in *CTTC Plan 705* (U.S. Air Force, 1988). The facility operates as a 1,000-kg/month generator. Hazardous waste is disposed of in cooperation with the base Defense Reutilization and Marketing Office (DRMO).

Chanute AFB has several plans that address hazardous waste management on the base. The *Spill Prevention and Response Plan* (U.S. Air Force, 1988) addresses the prevention of the discharge of pollutants and includes a

Table 3.3-1. Hazardous Waste Storage Locations*

Site	Location	Description
Interim-Status Hazardous Waste Storage Facilities (1-Year Storage)		
1	Building 975	Jet engine test cell 15
Accumulation Points (90-day storage)		
1	Building 37	Storage facility
2	Building 51	Storage facility
3	Building 720	Storage yard northwest of the steam plant
4	Building 736	Storage facility
Satellite Accumulation Points		
1	Building 1	Room E144
2	Building 1	Room E145
3	Building 1	Paint shop
4	Building 30	Auto shop
5	Building 66	Print room 138
6	Building 68	Room 1010 oil storage, ADJ mechanical
7	Building 700	Rear of building
8	Building 720	Paint area
9	Building 720	Battery storage area
10	Building 727	Outside fenced area
11	Building 729	Motor pool
12	Building 850	Dental X-ray clinic
13	Building 923	Inside shop
14	Building 927	Rear of building

*As of June 1991.

contingency plan to address unauthorized releases. The base also has a plan for the management of hazardous waste (U.S. Air Force, 1986b).

Closure Baseline. All of the hazardous waste will be removed from the interim storage facilities, accumulation points, and satellite accumulation points. Disposal of these wastes will be tracked in accordance with the RCRA. At the time of base closure, all of the hazardous waste generated by base functions will have been shipped off site. Hazardous waste generated by the disposal management team will be tracked to ensure proper identification, storage, transportation, and disposal, as well as implementation of waste minimization programs.

3.3.3 Installation Restoration Program Sites

The IRP is a DOD program to identify, characterize, and remediate environmental contamination on military installations. The DOD implemented the IRP in 1980 to clean up health-threatening sites on its installations. Although acceptable at the time, procedures followed prior to the mid-1970s for managing and disposing of many wastes resulted in contamination of the

environment. The program established a process to evaluate past disposal sites, control the migration of contaminants, and control potential hazards to human health and the environment. Section 211 of the Superfund Amendments Reauthorization Act (SARA), codified as the Defense Environmental Restoration Program (DERP), ensures that the DOD has the right to conduct its own environmental restoration programs.

The original IRP was divided into four phases consistent with the CERCLA:

- Phase I: Problem Identification and Records Search
- Phase II: Problem Confirmation
- Phase III: Technology Base Development
- Phase IV: Corrective Action.

After the SARA was passed in 1986, the IRP was realigned to incorporate the terminology used by the U.S. EPA and to integrate the new requirements under SARA. The result was the creation of three IRP stages:

- Stage 1: Preliminary Assessment/Site Inspection (PA/SI)
- Stage 2: Remedial Investigation/Feasibility Study (RI/FS)
- Stage 3: Remedial Design/Remediation Action (RD/RA).

The preliminary assessment portion of Stage 1 is comparable to Phase I and consists of a records search and interviews to determine whether potential problems exist. A brief on-site investigation, which may include soil and water sampling, is performed to give an initial characterization of a potential site.

The remedial investigation portion of Stage 2 is similar to Phase II and consists of additional field work and evaluations in order to assess the nature and extent of contamination. It includes a risk assessment and is used to determine the need for site remediation.

Phase IV has been replaced by the FS in Stage 2 and the RD within Stage 3. The FS documents the development, evaluation, and selection of remedial action alternatives to clean up the site. The selected alternative is then designed (RD) and implemented (RA). Long-term monitoring is often performed in association with site cleanup to assure future compliance with contaminant standards or achievement of cleanup goals. The Phase III portion of the IRP process is not included in the normal SARA process. Technology development under SARA is done under separate processes, including the Superfund Innovative Technology Evaluation program.

Preclosure Reference. Because the Air Force began the IRP process at Chanute AFB prior to terminology and procedural changes, both phases and stages are referred to in the IRP administrative record. The Phase I IRP study at Chanute AFB was summarized in a Records Search document dated December 1983 (Engineering-Science, 1983). The records search identified six potential disposal sites that required additional study.

From 1984 to 1986, investigations were conducted on the base to assess the potential contamination at the identified waste disposal sites. This process identified and evaluated seven sites: the six from the 1983 study and a tank sludge disposal pit (Figure 3.3-1). During 1988, two rounds of groundwater and surface water sampling were performed. The results were inconclusive, so additional sampling was initiated that included the base water supply wells and perimeter monitoring wells. These wells were sampled quarterly from December of 1988 until September of 1989. Additional deep aquifer (Illinoian) and shallow aquifer (Wisconsinan) monitoring wells were installed in August-September 1989.

Two Confirmation/Quantification documents, published in October 1986, indicated that further remedial investigations and feasibility studies would be required during the remedial program. A remedial investigation data summary report will be prepared in the spring of 1991.

Laboratory tests for volatile organic compounds (VOCs), semivolatile organics, inorganics, and some metals were performed from December 1987 to November 1988. The results were rejected because of laboratory irregularities. Additional laboratory testing is being performed to validate the results of the past analysis.

In accordance with the CERCLA, all federal facilities were subjected to investigation by the U.S. EPA for possible inclusion on the National Priorities List (NPL), as federal "Superfund" sites. The IRP sites at Chanute AFB did not contain sufficient contamination to warrant their listing as NPL sites. As a result, these sites are not managed under the same regulations governing NPL sites and state laws concerning removal and remedial actions apply to such actions at Chanute AFB.

The Air Force is committed to the identification, assessment, and remediation of the contamination resulting from past Air Force activities at Chanute AFB. In furtherance of that commitment, the U.S. Air Force entered into a Memorandum of Understanding (MOU) with the IEPA, the IDOT, and the Village of Rantoul on 25 September 1990, which created an Environmental Coordination Team to oversee IRP activities at Chanute AFB. The IRP is an active program on Chanute AFB and will continue after base closure if necessary to ensure that all sites have been properly remediated. Investigation results will be studied to determine locations where remedial actions are needed. Feasibility studies will be completed to determine the most appropriate remedial action and then the remedial action will be implemented. When remedial actions are complete, the Air Force will continue to monitor the sites as necessary to assure the effectiveness of the remedial action. The specifics of future actions cannot be determined until current field investigations, associated risk assessments, and screening or remedial alternatives are completed and reviewed by the members of the Environmental Coordination Team. This review process will ensure that appropriate remedial actions are implemented to clean up existing contaminants.

Installation Restoration Program Sites

Chanute AFB
Rantoul, Illinois

EXPLANATION

IRP Sites

Base Boundary



0 500 1000 2000 Feet

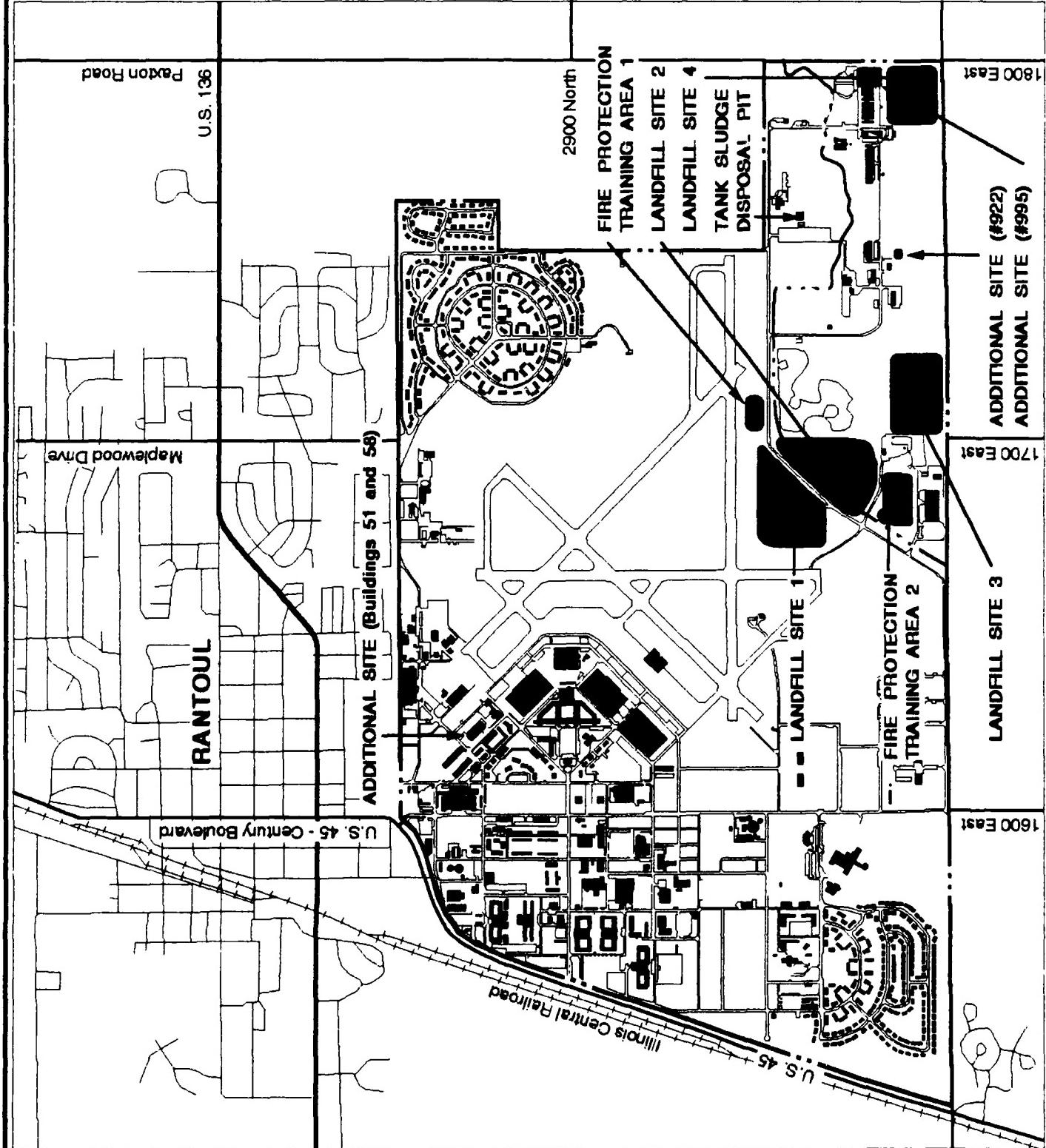


Figure 3.3-1

In addition to the mandates of the IRP, prior to the transfer of any property at Chanute AFB, the Air Force must also comply with the provisions of CERCLA § 120. CERCLA § 120h requires that, before property can be transferred, the United States must provide notice of specific hazardous waste activities on the property and include in the deed a covenant warranting that "all remedial action necessary to protect human health and the environment with respect to any [hazardous] substance remaining on the property has been taken before the date of such transfer." Furthermore, the covenant must also warrant that "any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States." To ensure that money is available to conduct environmental restoration at military installations scheduled for closure, Congress appropriated \$100,000,000 to the Defense Base Closure Account for fiscal year 1991 to be used exclusively for that purpose. It is expected that future authorization acts will continue to fund environmental restoration activities at closing installations. In light of the continuing responsibility of the Air Force for restoration activities at Chanute AFB, it is unlikely that such activities would be eligible for Federal funding under the Airport Improvement Program managed by the FAA.

3.3.3.1 Landfill Site 1. This approximately 19-acre site is northwest of Salt Fork Creek, in the southeastern portion of the base. When the landfill was in use, from the late 1930s until 1960, it received the majority of the wastes generated on base. This included traditional garbage, construction debris, empty pesticide containers, shop wastes, and metals. The area fill method was used at this site; the landfill material was frequently burned. The landfill is estimated to be approximately 8 to 10 feet deep, with a cap of approximately 0 to 6 inches. A small arms and trap-shooting range and ancillary building are located on this old landfill site. No wastes are generated from these shooting ranges other than expended lead shot.

In 1986, three shallow monitoring wells (less than 25 feet deep) were installed and samples taken. Trace concentrations of oil, grease, and phenolic compounds were found. The top of this shallow aquifer can be as close to the surface as 5 to 8 feet.

In 1987, a geophysical survey defined the boundaries of the landfill and identified areas containing metallic objects. Four shallow wells were installed to monitor the upper aquifer. The analytical results from the groundwater, surface water, and sediment samples from Salt Fork Creek have not indicated pollutant concentrations above the detection limits. The hydraulic gradient indicates that groundwater flows toward the south or south-southwest. The upper aquifer may be influenced by the recharge from Salt Fork Creek and some recharge from Heritage Lake. The hydraulic gradient indicates the probable dispersion path for potential or existing contaminants.

Two monitoring wells in the deeper aquifer have been placed to a depth of approximately 65 feet. There appears to be no confinement of the two aquifers and contaminant transfer between the aquifers is of concern. Sampling of the

shallower wells and surficial soil sampling from the landfill cap will be performed. In addition, the landfill cap thickness will be determined over several locations at this site and incorporated into the remedial design for a proposed final cap.

3.3.3.2 Landfill Site 2. This site encompasses approximately 20 acres and is located southeast of Salt Fork Creek and Landfill Site 1. This landfill site was used for roughly 15 years beginning in the early 1950s. Waste received included garbage, shop waste, construction materials, and possibly four drums containing 2,4-D or 2,4,5-T herbicides. The area fill and periodic burn method of management was used at this site. The landfill is approximately 8 to 10 feet deep.

One monitoring well was installed at this site. Surface water samples from the area adjoining Salt Fork Creek were also taken and analyzed. Trace concentrations of phenolic compounds were detected in the monitoring well and the organic solvent trichloroethylene (TCE) was discovered in the surface water sample.

During 1987, a geophysical survey was performed at the site to determine its boundaries. Four additional shallow monitoring wells were placed at the periphery of this site. Results from the groundwater sampling indicated concentrations of organic contaminants below the laboratory detection levels. Recently, another monitoring well was installed into the deeper aquifer. Additional sampling of both the monitoring wells and the surficial soils within the landfill is needed.

3.3.3.3 Landfill Site 3. The site encompasses approximately 20 acres, and is located southeast of Landfill Site 2, adjacent to the southern base boundary. This landfill was operated from 1967 until 1970. Waste included garbage, shop waste, and construction debris. The landfill may have received the four drums of herbicide (2,4-D or 2,4,5-T) previously noted for Landfill Site 2. The area fill and periodic burning method was employed. The depth of the fill is currently unknown; the cap is of varying depth to a maximum of approximately 1 foot.

Trace amounts of oil, grease, phenolic compounds, and benzene, toluene, ethyl benzene, and xylene (BTEX) were discovered in samples taken from three shallow monitoring wells around the periphery of the site. In 1987, five peripheral monitoring wells were installed into the shallow aquifer. Quarterly sampling found low levels of organic compounds that were generally below federal maximum contaminant levels (MCLs). During this activity, a downgrade and deeper monitoring well was installed and sampled in the deeper aquifer. Five subsequent samplings have failed to show significant concentrations of organic compounds. Most of the samples were below detection limits.

Projected work activity at this site will be limited to confirmation sampling of the existing monitoring wells, in both the shallow and deeper aquifers. The surficial

soils are to be sampled and the landfill cap thickness determined at the prescribed locations.

3.3.3.4 Landfill Site 4. This site encompasses 16 acres at the southeast corner of the base. The site was operated for approximately 4 years beginning in 1970, receiving garbage, shop residues, and construction and demolition debris. The trench and area fill method of management was practiced. Occasional burning may have taken place. Currently, a simulated grenade launching facility and access road are situated on the southeastern and eastern portions of this site. The simulated grenade activity does not generate waste.

In 1986, four shallow monitoring wells were installed. Volatile compounds, phenolic compounds, oil, and grease were found in trace amounts. In 1987, four shallow monitoring wells and one downgradient deeper well were installed. Trace concentrations of organic contaminants (phenolic compounds, chloroethane, and BTEX), oil, and grease were detected in the shallow wells. Geophysical surveys and an aquifer pump test were performed.

Scheduled work includes confirmation sampling of the existing wells and surficial soil sampling from the landfill cap.

3.3.3.5 Sludge Disposal Pit (Building 932). This site, measuring 25 by 30 feet, is on the east side of building 932, northwest and upgradient of Landfill Site 4. Sludges from the cleanout of fuel tanks were placed in this diked pit from the mid-1950s through 1979. A JP-4 fuel line leak occurred near the pit in 1985. Vegetation disturbance has been noted close to the building and pavement.

One shallow well was installed in 1986. The sludge pit soils and surface waters were sampled. Trace amounts of phenolic compounds and 50 parts per million (ppm) of lead were detected in both the surface water and sludge samples. The contaminant concentrations in the groundwater samples were below detection limits. In 1987, a soil organic vapor survey and an aquifer pump test were performed. The vapor survey identified areas within the sludge pit that had elevated organic vapor concentrations.

Subsequently, two shallow monitoring wells were installed and samples taken. Both surface water and sediment samples were collected from the intermittent stream adjacent to this site and along Salt Fork Creek. Samples from the surface waters and soils contained low concentrations of hydrocarbons and associated compounds. The quarterly sampling of the monitoring wells failed to find concentrations above the testing detection levels. A deeper monitoring well has been installed at the site and sampling will be performed.

3.3.3.6 Fire Training Area 1 (Inactive). This site covers approximately 2 acres adjacent to Salt Fork Creek and northwest of Landfill Site 1. This site was used for fire suppression training beginning in the early 1950s through the mid-1960s. The area reportedly received old aircraft, waste fuels, paints, solvent

waste, paint thinners, and other combustible compounds. The training fires were extinguished with protein foam.

In 1986, two shallow monitoring wells were installed and sampling was performed. Trace amounts of oil and grease were detected in the aquifer. In 1987, two soil borings and a soil organic vapor study were conducted. One monitoring well was also installed in the shallow aquifer and soil and surface water were sampled. The soil organic survey indicated two areas of organic solvent contamination. Soil boreholes confirmed the presence of contamination in this location. Surface water samples from Salt Fork Creek indicated low (below MCLs) concentrations of organic compounds. The sediments from Salt Fork Creek indicated significant concentrations of hydrocarbon compounds. The wastewater discharge from the sewage plant was immediately upstream from the sediment sampling locations prior to December 1987. This discharge may have contributed to the contamination. The groundwater samples from the shallow wells were at or near the detection limits for the organic solvent constituents. A monitoring well was installed in the deeper aquifer and samples taken during 1990. Confirmation sampling will be performed at this site and a risk assessment is scheduled.

3.3.3.7 Fire Training Area 2 (Active). This site encompasses approximately 15 acres and is located south of Landfill Site 2 and east of Salt Fork Creek. This site has been active since 1965. Until the late 1970s, the pit received waste oils, solvent wastes, hydraulic fluids, and waste fuels (JP-4). In the last few years, the area has received mostly JP-4 along with wood and cardboard. The extinguishing agents used at the site until the early 1970s were protein foam and carbon dioxide. Aqueous film-forming foam has been used since roughly 1973. In 1981, dry chemicals and Halon were used for fire suppression.

This area is operating with a permit issued on 8 August 1990 by the IEPA Division of Air Pollution Control. The permit expires on 9 August 1991. The permit allows the burning of 5,800 gallons of JP-4/JP-5, 1,500 pounds of wood, and 200 pounds of cardboard per week.

For the initial investigation, six shallow monitoring wells were installed. Surface water samples have been collected from the holding lagoon adjacent to the site. Three of the samples from the monitoring wells and three surface water samples had concentrations of VOCs, which include trichloroethylene, 1,2-trans dichloroethylene, chloroethane, and BTEX.

In 1987, additional surveys were performed, including testing for surface organic vapors, four exploratory borings, surface water and sediment sampling, and the installation of six shallow monitoring wells. The soil organic vapor survey found elevated levels on the periphery of the site. Sampling activity from the Salt Fork Creek areas failed to find significant contamination. Groundwater sampling found elevated concentrations of organic contaminants.

There are also two deeper wells. Sampling of one deeper downgradient monitoring well is scheduled. Sampling activity is anticipated for the training area sediment and the collection ditch. Additional sampling of the shallow wells is indicated.

3.3.3.8 Additional Sites. Three recently discovered sites have become IRP sites. On the eastern end of Building 995, soil contamination has resulted from the past disposal of TCE. This site is associated with the engine test cells. Hydrocarbon contamination and TCE have been identified in the soils southeast and adjacent to Building 922. This site is approximately 50 feet by 100 feet and may exceed 1,000 cubic yards; the site associated with an oil/water separator. Chemical compounds known as polynuclear aromatics have been discovered in the soil and groundwater near Buildings 51 and 58 during removal of 12 USTs. RI activities to determine the extent of contamination are in progress.

Closure Baseline. Initial plans assumed that approximately 75 acres of landfill would require capping, along with the application of pump-and-treat technology for approximately 10 years. Additional monitoring would follow the remediation. The landfills would be capped following state approval. No off-base migration of contaminants from the IRP sites or other base sources has been identified to date.

The remedial investigation draft is scheduled for the summer of 1991. The feasibility study concerning the proposed capping of the landfills is due in rough draft in the fall of 1991. Remediation will be complete or in place prior to October 1993; the majority of the long-term monitoring will be performed after base closure (U.S. Air Force, 1989b). Monitoring of the groundwater is usually a long-term requirement to assure the success of the RD and RA.

3.3.4 Storage Tanks

Regulations. Underground storage tanks (USTs) are subject to federal regulations under the RCRA. These regulations were mandated by the Hazardous and Solid Waste Amendments of 1984. The state of Illinois has adopted the EPA's UST regulations. The Illinois State Fire Marshal has established regulations for UST systems. Illinois regulations are more restrictive than federal regulations.

The IEPA manages the regulations for remediation of contaminant releases from USTs. The state of Illinois has a cleanup action level of 25 parts per billion (ppb) for benzene and 16.025 ppm for total BTEX. Residential heating oil tanks under 1,100 gallons are exempt under Illinois regulations unless they are known to have leaked into the environment. Both removed tank systems and the required tank rinse water are considered a special waste within Illinois.

The *Chanute AFB UST Management Plan* draft dated April 1990 (EG&G Idaho, Inc., 1990) described the number, types, and status of USTs on the base; the updated plan is due in 1991. A number of USTs on base were removed in 1990.

Preclosure Reference. There are 26 UST systems at Chanute AFB, listed in Table 3.3-2. Of these, 15 are currently active as defined by state and federal regulations, 8 are exempt from these regulations, and 3 are inactive and scheduled for closure.

Table 3.3-2. UST Inventory*

Tank	Size (gal)	Contents	Organization	Location and Use
68-1 ^{b, c}	1,000	Diesel	AGE ^(e)	AGE/refueling
68-2 ^{b, c}	1,000	JP-4 Jet fuel	AGE	AGE/refueling
100 ^a	1,500	# 2 Oil	Heat shop	Housing off./heating
118 ^a	1,000	# 2 Oil	Heat shop	Band Bldg/heating
294 ^d	1,000	# 2 Oil	Heat shop	Housing/heating
298 ^b	1,500	# 2 Oil	Heat shop	Housing/heating
391 ^a	2,000	# 2 Oil	Heat shop	Red Cross/heating
578 ^a	1,500	# 2 Oil	Heat shop	Camping area/heating
700-1 ^a	12,000	Premium unleaded gas	AAFES(f)	AAFES station/refueling
700-2 ^a	12,000	Unleaded gas	AAFES	AAFES station/refueling
700-3 ^a	10,000	Unleaded gas	AAFES	/ ESS station/refueling
711-1 ^a	12,000	Unleaded gas	POL	mil. gas station/refueling
711-2 ^a	12,000	Unleaded gas	POL	mil. gas station/refueling
711-3 ^a	12,000	Diesel	POL	mil. gas station/refueling
748-1 ^a	10,000	Unleaded gas	AAFES	AAFES station/refueling
748-2 ^a	10,000	Unleaded gas	AAFES	AAFES station/refueling
748-3 ^a	10,000	Unleaded gas	AAFES	AAFES station/refueling
902 ^d	1,000	# 2 Oil	AAFES(f)	Heat Shop Em.
921-1 ^a	6,000	Diesel	POL	Mil fuel/refueling
921-2 ^a	2,000	Unleaded gas	POL	Mil fuel/refueling
932-1 ^d	25,000	JP-4 Jet fuel	AGE	Hydrant/training
932-2 ^d	25,000	JP-4 Jet fuel	AGE	Hydrant/training
932-3 ^d	25,000	JP-4 Jet fuel	AGE	Hydrant/training
932-4 ^d	10,000	JP-4 Jet fuel	AGE	Hydrant/training
932-5 ^d	2,500	Waste JP-4 Jet fuel	AGE	Hydrant/training
963 ^d	550	Diesel	Power Production	Lift sta/em power

Plus four non-regulated tank systems.

* As of June 1991

(a) Active UST

(b) Abandoned (inactive) UST

(c) UST under contract to be removed

(d) UST exempt from regulations

(e) Aerospace ground equipment

(f) Army Air Force Exchange Service

Closure Baseline. The Air Force intends to close and remove all UST systems at Chanute AFB prior to base closure. There is a small above-ground storage tank in the proposed off-base acquisition acreage for the aviation support area.

Above-ground storage tanks associated with petroleum, oil, and lubricants (POL) are listed in Table 3.3-3. Large fuel storage tanks will likely be purged to minimize fire hazards.

**Table 3.3-3. Inventory of Above-Ground Storage Tanks
(Capacity Greater Than 660 Gallons)**

Storage Tank	Location	Capacity (gal)	Contents
128	North Side	1,000	Heating Oil
724	West Side ^(a)	1,000	Diesel
729	East Corner ^(a)	1,000	Diesel
739	Northeast Corner ^(a)	1,000	Diesel
743	West Side ^(a)	1,000	Diesel
805	North Side ^(a)	1,000	Diesel
851-1	Service Pit	1,000	Diesel
900	North Side	1,000	Heating Oil
904	East Side	2,500	JP-4
920-1	North Side	1,000	Diesel
920-2	North Side	1,000	Diesel
921-1	East Side ^(a)	5,000	Diesel
921-2	East Side ^(a)	1,200	Gasoline
934-1	North Side	2,500	JP-4
934-2	North Side	2,500	JP-4
934	North Side	1,000	JP-4
937	Southeast Corner	1,000	Fuel Oil
938	East Side	2,500	JP-4
934	East Side	2,500	JP-4
951	East Side ^(b)	240,000	JP-4
952	East Side ^(b)	240,000	JP-4

(a) No containment system.

(b) Locked oil/water separator system.

3.3.5 Asbestos

Regulations. Asbestos is regulated by both the EPA and the Occupational Safety and Health Administration (OSHA). Emissions of asbestos to the ambient air are controlled under Section 112 of the Clean Air Act, which establishes the National Emissions Standards for Hazardous Air Pollutants (NESHAP). There are separate regulations under the Toxic Substances Control Act (TSCA) to handle problems of asbestos-containing construction materials used in schools. The Asbestos Hazard Emergency Response Act addresses the management of asbestos in schools from kindergarten through grade 12.

During the renovation or demolition of buildings, asbestos may be released into the ambient air. Friable asbestos refers to the ability of asbestos-containing material (ACM) to release fibers as a result of crumbling or breakage from hand pressure. These fibers can be emitted from various building materials such as

pipe and boiler wrap, acoustic ceilings, and insulating materials. The NESHAP regulate the demolition or renovation of buildings with ACM. The EPA has a policy that addresses leaving asbestos in place and not disturbing the material.

It is current Air Force practice to remove or manage asbestos in active facilities when it poses a threat of release from friable ACM. The Air Force policy on the management of asbestos at bases that are being closed can be found in Appendix G. Chanute AFB has an asbestos management program in place (U.S. Air Force, 1989d). It is unlikely that any costs of removing or managing asbestos would be eligible for federal funds under the Airport Improvement Program.

Baseline Description. A base-wide survey for ACM is required by the state of Illinois disclosure law prior to base disposition. A survey of asbestos on base was performed in 1990; survey results are in preparation. An asbestos abatement plan is due in 1991.

3.3.6 Pesticide and Herbicide Usage

Regulations. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Illinois Lawn Care Products Application and Notice Act require that applicators of all pesticides and fungicides must be certified and licensed by the state of Illinois. Applicators must adhere to manufacturer's instructions for storage, mixing, and application of all chemicals.

Preclosure Reference. All of the insecticides, fungicides, and herbicides utilized at Chanute AFB are stored in Building 744 (Entomology Shop) (see Table 3.3-4).

**Table 3.3-4. Insecticide/Fungicide/Herbicide Storage,
Entomology Building**

Name	Quantity
Insecticide	
Diazinon 4E (liquid)	5 gallons
Triumph (liquid)	8 gallons
Grub Control (granular)	7,000 pounds
Fungicides	
Banner (liquid)	20 gallons
Daconil 2787 (liquid)	50 gallons
Banol (liquid)	1.5 gallons
Subdue (liquid)	8 gallons
Rubigan (liquid)	1.5 gallons
3336 (granular)	24 pounds
Herbicides	
Acclaim (liquid)	1 gallon
Surflam (liquid)	5 gallons
Round-up (liquid)	5 gallons
2, 4, D (liquid)	5 gallons
Sonar (liquid)	1.5 gallons

Closure Baseline. At the time of closure, pesticides and herbicides will continue to be utilized in the Entomology Shop and the golf course maintenance area.

3.3.7 Polychlorinated Biphenyls (PCBs)

Regulations. Commercial PCBs are industrial compounds produced by chlorination of biphenyls. PCBs persist in the environment, accumulate in organisms, and concentrate in the food chain. PCBs were used in electrical equipment, primarily in capacitors and transformers, because they are electrically nonconductive and stable at high temperatures. The disposal of these compounds is regulated under the federal TSCA, which banned the manufacture and distribution of PCBs with the exception of PCBs used in enclosed systems. By definition, PCB equipment contains 500 ppm PCBs or more, whereas PCB-contaminated equipment contains PCB concentrations greater than 50 ppm but less than 500 ppm. The EPA regulates the removal and disposal of all sources of PCBs containing 50 ppm or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

Closure Baseline. A survey to test the PCB content of capacitors and transformers was completed in November 1989. The PCB capacitors were removed prior to 1 October 1988, and replaced with non-PCB capacitors. Appendix B from the closure EIS (U.S. Air Force, 1990c) contains a list of the PCB-contaminated devices at Chanute AFB, including the locations and contaminant concentrations of the large transformers. There are currently five active, large, PCB-contaminated transformers on the base that must be retrofitted. Two of these are in Building 68 and three are within the Building 851 hospital area. The Air Training Command will remove and retrofit all of the PCB-contaminated devices prior to disposal of the property.

3.3.8 Radon

Regulations. Radon is a naturally occurring, colorless and odorless radioactive gas that occurs as a product of the radioactive decay of naturally occurring uranium. Radium is found in high concentrations in rocks containing uranium, granite, shale, phosphate, and pitchblende. Radon in the outside air is diluted to insignificant concentrations. Radon that is present in surrounding soil enters a building through small spaces and openings and can accumulate in enclosed areas such as basements. The cancer risk from exposure through the inhalation of radon is currently a topic of concern.

There are no federal regulations setting standards for radon exposure. U.S. Air Force policy requires implementation of the Air Force Radon Assessment and Mitigation Program (RAMP) to determine levels of radon exposure of military members and their dependents. Results from completed surveys provide information for the development of mitigation plans, where required. The U.S. EPA has made testing recommendations for both residential structures and schools. For residential structures with a 2- to 7-day charcoal canister test, a

level between 4 to 20 picocuries per liter (pCi/l) should result in additional screening within a few years. For levels of 20 to 200 pCi/l, additional confirmation sampling should be done within a few months. A reading in excess of 200 pCi/l should result in immediate evacuation of the structure. Schools are to use a 2-day charcoal canister; results of 4 to 20 pCi/l require a 9-month school year survey. It is recommended that the survey be performed with either an alpha track detector survey or ion chamber survey. If a 3-month alpha track detector shows levels greater than 20 pCi/l, a diagnostic survey or mitigation is indicated (Table 3.3-5).

Table 3.3-5. Recommended Radon Surveys and Mitigations

Facility	EPA Action Level	Recommendation
Residential	4 to 20 pCi/l	Additional screening. Expose detector for 1 year.
Residential	20 to 200 pCi/l	Perform follow-up measurements. Expose detectors for no more than 3 months.
Residential	Above 200 pCi/l	Follow-up measurements. Expose detectors for no more than one week. Immediately reduce radon levels.
Two-Day Weekend Measurement		
School	4 to 20 pCi/l	Confirmatory 9-month survey. Alpha track or ion chamber survey.
School	Greater than 20 pCi/l	Diagnostic survey or mitigation.

Congress has set a national goal for indoor radon concentration of the outdoor ambient levels of from 0.2 to 0.7 pCi/l.

Closure Baseline. The Air Force has directed an RAMP for assessment of all habitable structures on bases. A small radon sampling survey was conducted at Chanute AFB in FY 1988. Of the 1,323 military family housing units on base, 33 were tested for radon. One housing unit exceeded the Air Force's action level of 4 pCi/l (4.4 pCi/l). The base has implemented a detailed radon assessment program in accordance with U.S. Air Force policy, and a further radon survey is scheduled for 1991.

3.3.9 Medical/Biohazardous Waste

Regulations. Current federal standards do not require regulation of medical wastes. The Medical Waste Tracking Act was passed for a 2-year period beginning in 1988. This act covered five states plus the District of Columbia and Puerto Rico. Illinois currently manages infectious waste under a regulation that allows the autoclaving of waste to render it no longer infectious. This process exposes infectious waste to temperatures of 250°F and 20 psi of steam, effectively sterilizing these wastes.

Closure Baseline. The base hospital, with a 200-bed capacity, currently operates 15 beds. All of the medical waste, including "sharps," tubing, gauze, and other contaminated materials, is incinerated in a permitted hospital

pathological incinerator that has secondary combustion for air pollution control. The laboratory at the base hospital autoclaves all biohazardous waste prior to disposal. The hospital does not use either chemotherapeutic (cytotoxic) drugs or radiological sources. The photochemical and dental wastes are processed in a silver recovery system before being transported to the DRMO for disposal.

At base closure, the hospital will be inactive and no biohazardous waste will be generated. The existing biohazardous waste will either be removed or treated prior to closure.

3.4 NATURAL ENVIRONMENT

This section describes the affected environment for natural resources: geology and soils, water resources, air quality, noise, biological resources, and cultural resources.

3.4.1 Geology and Soils

The ROI for soils is localized and limited to the immediate site area. Sediment transfer associated with erosion is minimal and does not expand the ROI beyond the site area. The ROI for geology extends to neighboring mineral deposits that will be heavily utilized during construction activities, namely the sand and gravel deposits north of Rantoul.

3.4.1.1 Soils. Surface soils are the chief natural resource in Champaign County. Farms utilize more than 80 percent of the total acreage; corn and soybeans are the major crops (U.S. Department of Agriculture, 1982). Near the runway area, approximately 300 acres of Chanute AFB property are leased for farming. Required use of conservation practices acceptable to the U.S. Department of Agriculture Soil Conservation Service (SCS) ensures that the leased areas, much of which contain prime farmland, remain unspoiled (U.S. Air Force, 1986a).

Most of the area soils are silt loam or silty clay loam. Scattered lenses of sand and gravel are common in the subsoil. Undisturbed soil profiles are found in the northeast recreational area and in isolated areas near the southeast part of the base (U.S. Department of Agriculture, 1982). The following properties make the soil suitable for farming:

- The relative mass of organic matter in the topsoil is medium to high, ranging from 2 to 7 percent
- The water capacity of the soil (available to plants) is high and typically comprises nearly 0.2 inch of water per inch of soil
- Surface layers of soil are often slight to medium in acidity, with pH values greater than 5.5; subsoil layers are generally neutral in pH.

Ponding occurs as a result of poor natural drainage of the soils. Poor drainage is the result of soils that have relatively high silt or clay content, a relatively high water table, and a very low hydraulic gradient (0.0015 to 0.0017 ft/ft) (U.S. Army

Corps of Engineers, 1987). The poor natural drainage also contributes to a medium to high potential for frost action (U.S. Department of Agriculture, 1982).

Water and wind erosion are not significant problems because areas are generally under vegetative cover, lie beneath facilities or pavements, or are leased and managed with SCS-recommended practices. As evidenced by minor erosion along Salt Fork Creek, the silt loam soils that are widespread on the base could be easily eroded if they remain barren or if they remain on excessively steep slopes for extended periods of time.

The shrink-swell potential of soils on base ranges from low to moderate (the coefficient of linear expansion ranges from 0.01 to 0.06) and imposes few constraints on construction activities. Most of the soils to a depth of 5 feet are in the CL, CH, SC, ML, or SM categories of the Unified Soil Classification System (USCS), (U.S. Department of Agriculture, 1982). The soils are considered poor to fair for use as subgrade and are less suitable use as base or subbase. Typical engineering parameter values associated with these soils at a depth of 3 feet are as follows (U.S. Air Force, 1981):

• Bearing capacity (pounds per square foot)	2,000-3,000
• California Bearing Ratio	4
• Modulus of subgrade reaction	65

Wetland (hydric) soils occur in creek washes and depressions near the southeast part of the base. Soils in these depressions typically contain more clay and are gleyed (sticky and bluish-gray as a result of excessive moisture) and sometimes mottled (Illinois Natural History Survey, 1990).

3.4.1.2 Geology

Physiography and Geology. Chanute AFB is in the Interior Lowland Physiographic Province of east-central Illinois. The base is located on Quaternary glacial deposits 250 to 300 feet thick (U.S. Air Force, 1990c). These glacial deposits correspond to three glacial periods: the Wisconsin, Illinoian, and Kansan (Wickham, 1979). Glacial till of the Wedron formation (Batesstown Till Member) is common around Chanute AFB and typically consists of unstratified, unconsolidated, heterogeneous mixtures of clay, sand, gravel, and cobbles (Figure 3.4-1). Glacial deposits on Chanute AFB consist of silty till intercalated with sand, gravel, and loess (windblown silt) (Willman et al., 1975). The three glacial deposits are bounded by soils corresponding to interglacial periods (i.e., Modern Sangamonian, Yarmouthian, and Aftonian soils) (U.S. Air Force, 1990c; Pliskin and Bergstrom, 1975).

Much of the regional topographic relief is a result of past glacial activity. Chanute AFB and Rantoul are located on a glacial till plain between three glacial end moraines: the Rantoul Moraine (largely buried) to the west, the Urbana Moraine to the south, and the Bloomington Moraine to the north and east. The land surface is relatively smooth with a gentle slope down to the southeast.

Surface Geology and Mines

Chanute AFB Rantoul, Illinois

EXPLANATION

- Moraine Deposits
- Sand and Gravel Pit
- Wedron Formation
Snider Till Member
Balestown Till Member
- Henry Formation
Batavia Member
- Contact between
glacial till units

Source: Anderson, R.C., 1960
and Willman et al., 1975.

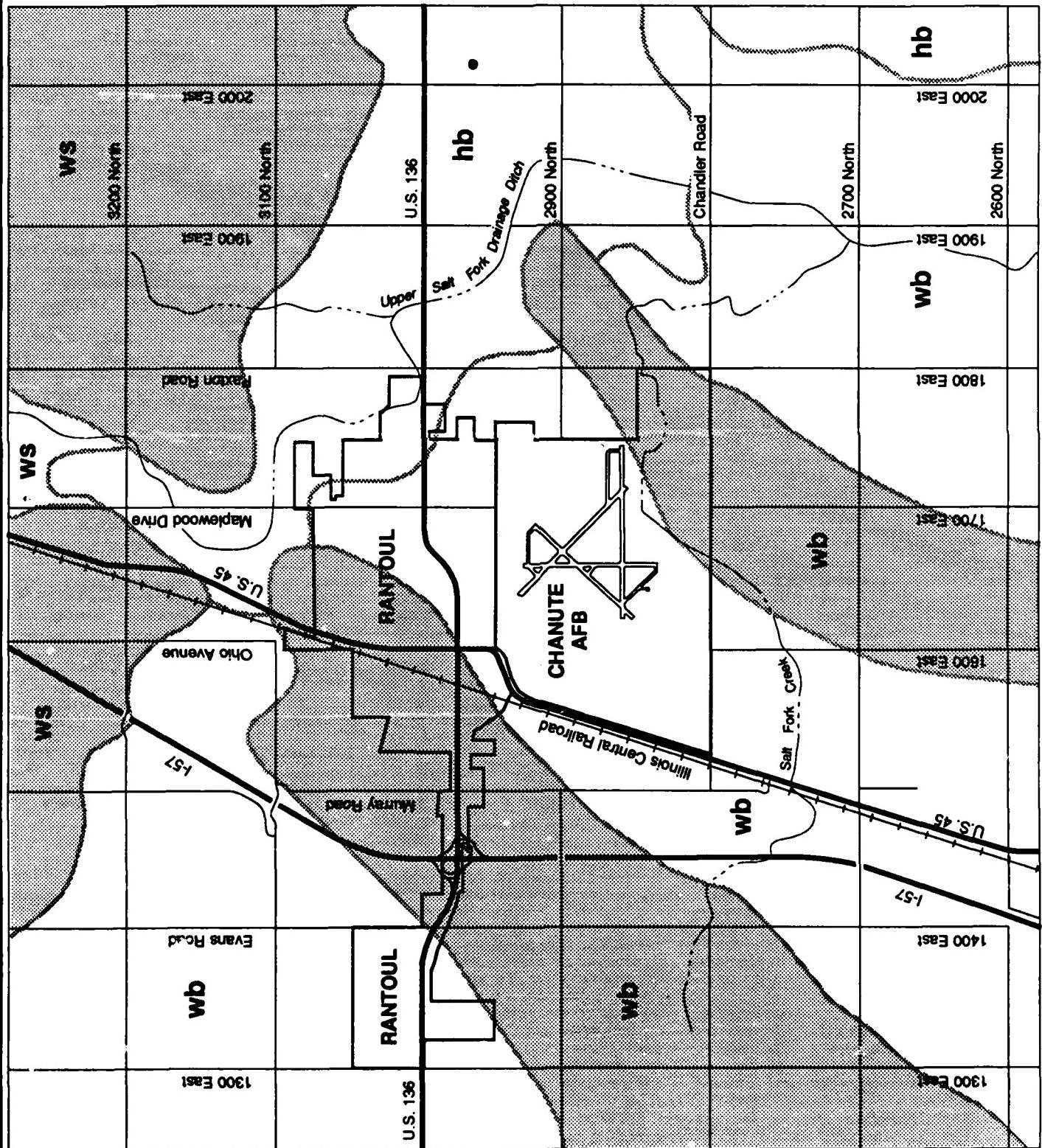
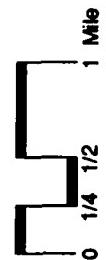


Figure 3.4-1

Elevations range from 750 feet above MSL in the northeast portion of the base to about 710 feet above MSL near the southeast corner of the installation boundary. The southeast portion of the base exhibits undulating topography.

No bedrock exposures are present in the immediate vicinity of the base. Bedrock underlies the glacial deposits and consists of Pennsylvanian, Mississippian, and Devonian age shales, sandstones, limestones, and dolomites. Pennsylvanian rocks are dominated by shales with interbedded sandstones and limestones, Mississippian strata are predominantly limestones and dolomites with interbedded shales, and Devonian strata are primarily shales, limestones, and dolomites (Visocky, et. al., 1985).

The dominant structural feature in the area is the La Salle Anticlinal Belt that trends north-south through Champaign County. This anticline has folded the bedrock material into gentle arches. These folds have fractured the bedrock, thereby increasing the permeability of the sedimentary rocks. The axis of this anticline is about 2 miles west of Chanute AFB (U.S. Air Force, 1990c).

Mineral Resources. Several sand and gravel deposits are located within 5 miles of Chanute AFB. A large deposit is located northeast and east of Rantoul, along the southern boundary of the Bloomington Moraine. Smaller sand and gravel deposits can be found northwest of the base. No sizeable deposits are known to exist on base (U.S. Air Force, 1990c).

Seismicity. Champaign County is in Seismic Zone 1 (Heigold and Larson, 1990). No major active faults occur in or near Champaign County. The New Madrid Seismic Zone includes part of southern Illinois and areas farther south. In a worst-case 500-year seismic event on the New Madrid fault, Champaign County could experience minor damage (e.g., dishes falling from shelves and cracking of plaster).

3.4.2 Water Resources

The ROI for surface water and groundwater generally extends beyond the base property to areas affected by changes in resource usage. There are no coastal zones, coastal barriers, or wild and scenic rivers in the ROI.

3.4.2.1 Surface Water. Surface water resources on base and within 2 miles of the base include a recreation lake; three golf course ponds; Salt Fork Creek, which runs through the southeast portion of the base; and the Upper Salt Fork Drainage Ditch, into which the creek flows.

The recreation lake, in the southeast section of the base, has a surface area of approximately 20 acres and is used for fishing. The present recreational lake was constructed in 1984 from an area originally occupying a series of sewage lagoons. The lake level is maintained by pumping groundwater as needed. Trees and other vegetation were planted to stabilize the soils along the

shoreline. Three golf course ponds are located east of the base runways. Each pond covers an area of approximately 2 acres.

Salt Fork Creek flows just outside the southern installation boundary and across 1.9 miles of the southeastern section of the base. Salt Fork Creek receives much of the on-base drainage through a storm drainage system that includes sewers, drains, and ditches (U.S. Army Corps of Engineers, 1987). The creek has been channelized so there are no floodplain or flood-prone areas on base (U.S. Air Force, 1987a). The nearest 100-year floodplain is approximately 3,000 feet southeast of the base. Salt Fork Creek drains into the Upper Salt Fork Drainage Ditch approximately 1 mile southeast of the base. The Upper Salt Fork Drainage Ditch feeds into the Salt Fork of the Spoon River, which, in turn, drains into the Vermillion River. There are no flood plains within the immediate areas east of the base property.

Wetland areas are present in the southeast part of the base, along Salt Fork Creek and in nearby depressions. These areas are typically inundated with creek flow or surface runoff during intense rains (Illinois Natural History Survey, 1990). One site is inundated in the spring.

Surface Water Quality. Samples from Salt Fork Creek, collected less than 1 mile downstream from the base boundary, show no evidence of violations of state secondary contact water use standards. However, the fecal coliform count is high, exceeding the state general water use criterion for bathing values (Short, 1989).

The Rantoul WWTP discharges effluent into the Upper Salt Fork Drainage Ditch. Chanute AFB stopped discharging into the drainage ditch in 1988 when the base was connected to the Rantoul WWTP. Rantoul's current NPDES permit for wastewater treatment effluent discharge to the Upper Salt Drainage Ditch is effective through January 1995.

3.4.2.2 Surface Drainage. The storm drainage system is tributary to Salt Fork Creek and consists of storm sewers, curb inlets and yard drains, airfield drainage inlets, drainage ditches, and storm water pump stations. Storm water pump stations are located at the hospital and at the northeast and southwest residential areas. The change in elevation from the highest to the lowest points on the base is 35 feet, providing a hydraulic gradient of 0.0017 ft/ft. This very low gradient has led to the use of large sewers that are not self cleaning (EDAW et al., 1990; U.S Army Corps of Engineers, 1987).

Natural drainage in the base vicinity is poor and results in saturated conditions and ponding. These tendencies primarily result from the very low hydraulic gradient, the fine texture of the soil (relatively high percentages of silt and clay), and the relatively high water table. Ponding is currently a problem near the southwest corner of the base west of the housing area. Surface runoff (sheet flow) is also prevalent across the golf course from the area north of the base (EDAW et al., 1990).

The Maintenance and Upgrade of Drainage Systems (MUDS) study (U.S. Army Corps of Engineers, 1987), completed in 1987, was conducted to identify problems with the storm water drainage system and to propose system improvements. Drainage problems persist in scattered areas around the base, including the runway.

3.4.2.3 Groundwater. Four hydrogeologic units underly the base; these include bedrock and glacial deposits of Wisconsinan, Illinoian, and Kansan age. None of the aquifers is designated by the EPA as a sole or principal drinking water resource for the area, pursuant to Section 1424(E) of the Safe Drinking Water Act, as amended. The upper Wisconsinan aquifer can potentially yield from 3 to 60 gpm; its water flows toward Salt Fork Creek. The underlying Illinoian aquifer, at a depth of approximately 70 feet, can yield up to 800 gpm in the thicker sand and gravel layers. The general direction of groundwater flow is to the south. Wisconsinan and Illinoian aquifers are not used by Chanute AFB or the Village of Rantoul as sources of drinking water (U.S. Air Force, 1990c).

The Kansan aquifer, at a depth of approximately 220 feet, consists of a layer of sand approximately 60 feet thick in which the water flows south. This aquifer, yielding up to 3,500 gpm, is called the Mahomet Sand and is one of the most productive aquifers in east-central Illinois (Kempton, et. al., 1990). Nine wells drilled into this aquifer supply the base with water. Seven of these wells are located in the northwest section of the base, and two are located in the southeast. The total volume of water pumped from existing wells averages about 2.0 MGD; the pumping capacity from these wells is nearly 3.4 MGD (Illinois Environmental Protection Agency, 1989b). With further development, total pumping capacity could be near 5.8 MGD, more than twice that currently pumped (U.S. Air Force, 1987a).

The uppermost bedrock aquifer is in fractured sedimentary rock and contains highly mineralized water. Because of the poor quality of this water and relatively low yields, the bedrock aquifer is not considered a reliable water source (U.S. Air Force, 1990c; Kempton and Morse, 1982).

The water table is generally within 10 feet of the ground surface and is at its highest levels in the spring. In some cases, ponding or flooding results from the high water table and poor soil permeability.

Groundwater Quality. An analysis of raw water samples from base wells in the Kansan aquifer shows no evidence of contamination. The drinking water for Chanute AFB and the Village of Rantoul meets all state and federal drinking water standards (Illinois Environmental Protection Agency, 1989b).

The quality of the water in the overlying Wisconsinan and Illinoian aquifers is not completely known. The most recent groundwater samples taken from the Wisconsinan aquifer indicate that organic contaminants are below detection limits or at levels below federal MCLs. An exception is Fire Training Area 2, where elevated concentrations of organic contaminants have been recorded.

Additional wells are planned in the Illinoian aquifer so that the water can be accurately characterized. For a complete discussion on groundwater quality related to IRP sites, see Section 3.3.3.

3.4.3 Air Quality

Air quality in a given location is described by the concentrations of various pollutants in the atmosphere, expressed in units of ppm or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Pollutant concentrations are determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and meteorological conditions related to the prevailing climate. The significance of a pollutant concentration is determined by comparison with federal and/or state ambient air quality standards. These standards establish limits on the maximum allowable concentrations of various pollutants in order to protect public health and welfare.

The existing air quality of the affected environment is defined by examining air quality monitoring records from monitoring stations maintained by the IEPA. Information on pollutant concentrations measured for short-term (24 hours or less) and long-term (annual) averaging periods were extracted from the monitoring station data in order to characterize the existing air quality background of the area. Emission Inventory Information was separated by pollutant and reported in tons per year in order to describe the baseline conditions of pollutant emissions in the area.

Identifying the exact ROI for air quality requires knowing the types of pollutants that will be emitted, the pollutant emission rates, the release parameters of the pollutant sources, the proximity relationships among sources, and the local and regional meteorological conditions. For inert pollutants (all pollutants other than ozone and its precursors), the ROI is generally limited to an area within a few miles downwind from the source. Ozone (O_3) is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants. The maximum effect of precursor emissions on increased O_3 levels usually occurs several hours after they are emitted, and therefore many miles downwind from the source. Thus, the ROI for O_3 may extend many miles downwind. For the air quality analysis, the ROI for project construction and operational activities would be the existing airshed surrounding Chanute AFB. For regulatory purposes, project emissions would be compared to emissions generated within Champaign County, Illinois.

Regulations. Federal standards have been established by the U.S. EPA and are termed the National Ambient Air Quality Standards (NAAQS). The NAAQS are defined as maximum pollutant concentrations that may not be exceeded more than once a year; annual standards may never be exceeded. These standards include maximum concentrations for O_3 , carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and lead (Pb). Within the study area, the IEPA has adopted the NAAQS to regulate pollutant levels. Additionally, the IEPA has

promulgated a state ambient air quality standard for total suspended particulates (TSP). The NAAQS and Illinois Ambient Air Quality Standards (IAAQS) are shown in Table 3.4-1.

Table 3.4-1. Illinois and National Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards ^a	
		Primary ^b	Secondary ^c
O ₃	1-hour	0.12 ppm (240 µg/m ³)	Same
CO	8-hour	9 ppm (10 mg/m ³)	Same
	1-hour	35 ppm (40 mg/m ³)	Same
NO ₂	Annual	100 µg/m ³ (0.05 ppm)	Same
SO ₂	Annual	80 µg/m ³ (0.03 ppm)	Same
	24-hour	365 µg/m ³ (0.14 ppm)	Same
	3-hour	none	1,300 µg/m ³ (0.5 ppm)
TSP	Annual	75 µg/m ³	60 µg/m ³
	24-hour	260 µg/m ³	150 µg/m ³
PM ₁₀ ^d	Annual	50 µg/m ³	Same
	24-hour	150 µg/m ³	Same
Pb	Quarter	1.5 µg/m ³	Same

- a. National standards, other than ozone and those based on annual averages or annual geometric means, are not to be exceeded more than once per year. The Illinois EPA has adopted the NAAQS to regulate pollutant levels.
- b. National Primary Standards express the level of air quality necessary to protect the public health from any known or anticipated adverse effects of a pollutant, allowing for a margin of safety to protect sensitive members of the population.
- c. National Secondary Standards express the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property, and adverse impacts on the environment.
- d. For federal purposes, the PM₁₀ standard replaced the TSP standard in July 1987; however, the IEPA has retained a TSP standard as part of the state standards.

3.4.3.1 Regional Air Quality. According to EPA guidelines, an area with air quality better than the NAAQS is designated as being in attainment; areas with worse air quality are classified as nonattainment areas. A nonattainment designation is given to a region if a primary standard for any criteria pollutant is exceeded at any point in the region for more than 3 days in 3 years. Currently, Champaign County is designated by the EPA as in attainment for all pollutants (Illinois Environment Protection Agency, 1990a).

The national standard for TSP was superseded in 1987 by a national standard for PM₁₀. However, the IEPA retains a TSP standard for permitting purposes and Prevention of Significant Deterioration (PSD) review. Champaign County is presently designated as a Group III area for PM₁₀, meaning that there is less than a 20 percent probability of exceeding the primary NAAQS for PM₁₀. The closest Group I site (an area with a 95 percent or greater probability of exceeding the primary standard) is more than 100 miles to the north in the southern portion of Chicago. The nearest area that exceeds Illinois standards for TSP is approximately 50 miles northwest of Rantoul.

Preclosure Reference. The IEPA currently operates an air monitoring network with stations located throughout the state of Illinois. The nearest air monitoring stations to Chanute AFB are in Champaign, 15 miles to the south. The two

stations in Champaign currently monitor levels of SO₂, O₃, and PM₁₀. Prior to 1989, TSP was monitored at one of these stations instead of PM₁₀.

Pollutant levels monitored at Champaign can be used as a conservative representation of existing air quality within the Chanute AFB area because Champaign is a larger urban area with more emission sources than the base and the surrounding Village of Rantoul.

The maximum pollutant concentrations monitored at the two Champaign stations in 1987 through 1989 are summarized in Table 3.4-2. These data show that the 1-hour NAAQS for O₃ and 24-hour IAAQS for TSP were exceeded on one occasion in 1987. Otherwise, monitored pollutant levels generally remained well below their respective ambient air quality standards.

Table 3.4-2. Preclosure Maximum Ambient Air Pollutant Levels

Pollutant/Averaging Time	Unit of Measure	MAXIMUM CONCENTRATIONS*					
		1987		1988		1989	
1st	2nd	1st	2nd	1st	2nd	1st	2nd
O ₃ 1-hr	ppm	**0.123	0.099	0.112	0.100	0.088	0.087
SO ₂ Annual 24-hour 3-hour	ppm	0.004 0.028 0.056	NA 0.028 0.054	0.005 0.027 0.056	NA 0.026 0.056	0.005 0.031 0.085	NA 0.026 0.071
TSP Annual 24-hour	µg/m ³ µg/m ³	52 **394	NA 148	52 134	NA 123	— —	— —
PM ₁₀ Annual 24-hr	µg/m ³ µg/m ³	— —	— —	— —	— —	*** 86	NA 70

Notes: * Pollutant concentrations measured at Champaign monitoring stations, the nearest monitoring site to the base.

** Exceeds the NAAQS or IAAQS.

*** Did not meet minimum statistical selection criteria for a representative sample.

NA = not applicable

Source: IEPA 1987, 1988, 1989a.

Closure Baseline. It can be reasonably assumed that pollutant concentrations will be similar to, or somewhat less than, concentrations experienced under preclosure conditions because a large number of emission sources will be eliminated and there will be fewer emissions at the time of closure. At base closure there will be significantly fewer motor vehicles operating in the Chanute-Rantoul area, the existing steam generating plant will be operated at a reduced level, and the pathological incinerator at the hospital will be shut down. These decreases in emission sources associated with closure of the base may be offset somewhat by the initiation of reuse activity prior to the final closure date. However, it is not expected that the amount of emissions associated with the initiation of reuse activities will be significant prior to 1994.

3.4.3.2 Air Pollutant Emission Sources.

Preclosure Reference. The most recent emission inventories for Champaign County and Chanute AFB are presented in Table 3.4-3. Because Champaign County is in attainment for all pollutants, the county inventory does not include mobile source emissions. Mobile source emissions from personal vehicles in the county were estimated based on the population of the county. The emission inventory for Chanute AFB is representative of preclosure conditions in 1988. The primary emission sources in the base inventory are motor vehicles, the coal-fired central heating plant (IEPA permit I.D. No. 019817AAC), the fire training operation (IEPA permit I.D. No. 019065), the natural gas heating plant (IEPA permit I.D. No. 029065AAC), No. 2 fuel oil heating of buildings, natural gas domestic heaters in base housing units, aerospace ground equipment school engines, generators, and fuel storage and transfer.

Table 3.4-3. Preclosure Emission Inventory for Chanute AFB and Champaign County (Tons/Year)

Source Category	CO	THC ^(a)	NO _x ^(b)	SO ₂	PM ₁₀
Chanute AFB ^(c)					
Incinerators	--	--	0.01	--	0.02
Fire School practice burns	341.0	244.5	2.5	0.2	78.7
Emergency generators	20.8	1.3	0.4	0.04	0.03
Natural gas-fired heating plant	6.3	0.3	1.6	0.03	0.2
Coal-fired heating plant	99.6	1.7	124.5	647.5	398.5
Natural gas-fired heaters	3.4	1.3	16.8	0.1	0.8
Fuel oil-fired heaters	0.6	0.3	2.2	17.6	0.3
Surface coatings	--	141.8	--	--	--
Aerospace ground equipment	1.4	1.1	0.1	0.01	0.1
Fuel storage and transfer	--	16.1	--	--	--
Military vehicles	2.7	0.3	0.3	0.04	0.1
Personal vehicles	632.1	70.6	63.2	10.2	26.0
Agricultural tilling	--	--	--	--	3.2
Wood dust	--	--	--	--	3.6
Subtotal	1,107.9	479.3	211.6	675.7	511.6
Champaign County ^(d)	392.0	2,193.0	2,578.0	4,412.0	1,657.0
Personal vehicles ^(e)	9,886.6	1,104.2	988.5	159.5	406.7
Total Champaign County	11,386.5	3,776.5	3,778.1	5,247.2	2,575.3

Note: (a) Total hydrocarbons

(b) Nitrogen oxides

(c) Emissions are for fiscal year 1984, except emissions for incinerators, practice burns, and heating plants are for fiscal year 1988.

(d) Emissions are for point sources only and do not include emissions from Chanute AFB (U.S. Air Force, 1990c).

(e) Emissions are estimates of personal vehicle emissions for the county, excluding personal vehicle emissions from Chanute AFB. Estimates were obtained by assuming that the ratio of population to vehicle emissions for the county was the same as that for the base.

Closure Baseline. The emission inventory for Chanute AFB after base closure can be estimated by eliminating the incinerator and the school categories and assuming that emissions other than those associated with heating and

power generation are proportional to population. The ratio of preclosure base population (including military personnel, military dependents, and civilian employees) to the base population after closure is applied to each of the Chanute AFB pollutant non-heating/power emission totals in Table 3.4-3 in order to obtain the closure emission estimates. This is a reasonable assumption because the most significant non-heating/power emission sources at Chanute AFB are motor vehicles, which are closely related to total population. Heating plants and power generators are assumed to operate at 20 percent of preclosure capacity in order to fulfill minimum building heating and power requirements. The base does not currently support a flying mission and there are, therefore, essentially no emissions associated with aircraft or flight operations.

The baseline emissions for Champaign County are assumed to be approximately the same at the time of closure as shown previously (Table 3.4-3) for 1989. This is a reasonable assumption because the population of Champaign County is projected to change at a rate of less than 1 percent per year over the period 1988 to 1993. Closure baseline emissions for the base and Champaign county are presented in Table 3.4-4.

Table 3.4-4. Closure Emission Inventory for Chanute AFB and Champaign County (Tons/Year)

Source Category	CO	THC ^(a)	NO _x ^(b)	SO ₂	PM ₁₀
Chanute AFB^(c)					
Incinerators	—	—	—	—	—
Fire School Practice Burns	—	—	—	—	—
Emergency generators	4.16	0.26	0.08	0.01	0.01
Natural gas-fired heating plant	1.26	0.06	0.32	0.01	0.04
Coal-fired heating plant	19.92	0.34	24.90	129.50	79.70
Natural gas-fired heaters	0.68	0.26	3.36	0.02	0.16
Fuel oil-fired heaters	0.12	0.06	0.44	3.52	0.06
Surface coatings	—	0.58	—	—	—
Fuel storage and transfer	—	0.07	—	—	—
Military vehicles	0.01	0.00	0.00	0.00	0.00
Personal vehicles	2.60	0.29	0.26	0.04	0.11
Agricultural tilling	—	—	—	—	0.01
Wood dust	—	—	—	—	0.01
Subtotal	28.75	1.92	29.36	133.10	80.10
Champaign County^(d)					
Personal Vehicles ^(e)	392.0 9,886.6	2,193.0 1,104.2	2,578.0 988.5	4,412.0 159.5	1,657.0 406.7
Total Champaign County	10,307.4	3,299.1	3,595.9	4,704.6	2,143.8

Note (a) Total hydrocarbons

(b) Nitrogen oxides

(c) Emissions, other than those from heating plants and power generators, are based on data from Table 3.4-3 times ratio of year 1993 base population to 1988 base population. Heating plant and power generator emissions are assumed to remain at 20 percent of the preclosure level.

(d) Emissions are for point sources only and do not include emissions from Chanute AFB (U.S. Air Force, 1990c).

(e) Emissions are estimates of personal vehicle emissions for the county, excluding personal vehicle emissions from Chanute AFB. Estimates were obtained by assuming that the ratio of population to vehicle emissions for the county was the same as that for the base.

3.4.4 Noise

The ROI for noise sources at Chanute AFB is limited to Champaign County, Illinois. The area most affected by the base closure and reuse is limited to the base property itself, the Village of Rantoul, and a small parcel of county land immediately adjacent to Rantoul.

Noise is usually defined as sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying (unwanted sound). The characteristics of sound include parameters such as intensity, frequency, and duration.

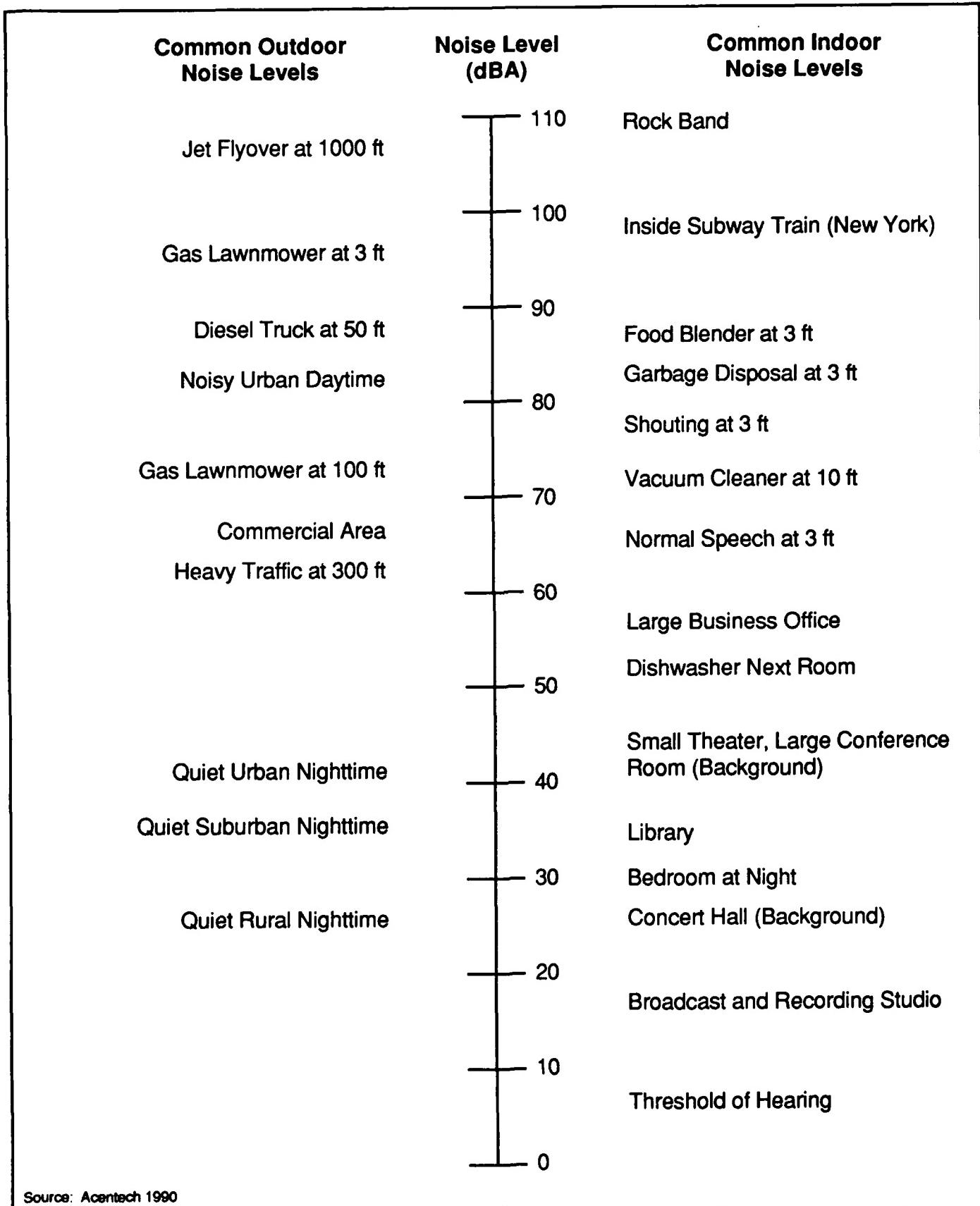
Sound can vary over an extremely large range of energy levels. The decibel (dB) is the accepted standard unit for measuring noise levels because it accounts for these large variations in energy. Table 3.4-5 presents examples of typical sound levels. Sound also varies with frequency or pitch. When measuring sound to determine its effects on a human population, A-weighted (dBA) sound levels are typically used. A-weighted sound levels represent the sound level according to a prescribed frequency response established by the American National Standards Institute, accounting for the response of the human ear.

Noise levels often change with time. To compare levels over different time periods, several descriptors were developed that take into account this time-varying nature. These descriptions are used to assess and correlate the various effects of noise on man and animals, including land use, sleep interference, and startle effects. One descriptor is the equivalent sound level (Leq). The Leq is formulated in terms of the equivalent steady-state, A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval.

A second descriptor is the maximum sound level (Lmax). The Lmax is defined to be the highest A-weighted sound level observed during a single event of any duration. Another descriptor used to describe time-varying sound is the Sound Exposure Level (SEL). The SEL value represents the A-weighted sound level integrated over the entire duration of the event and referenced to a duration of one second. Typically, most events last longer than one second and the SEL value will be higher than the maximum sound level of the event.

To determine the effects of noise over a long time period, the day-night average sound level (DNL) was developed. The DNL is the average A-weighted acoustical energy during a 24-hour period. It is calculated by averaging the hourly Leq values for a 24-hour period, adding a 10-dB penalty to the nighttime levels (between 10 pm and 7 am). This penalty accounts for the added intrusiveness of nighttime noise events as well as the generally lower background noise levels during these hours. The DNL was developed by the EPA and is used by the federal Department of Housing and Urban Development, the FAA, and the DOD. The DNL is an accepted unit for

Table 3.4-5 Comparative Sound Levels



Source: Acentech 1990

Chanute083 EIS

quantifying human annoyance to general environmental noise, which includes aircraft noise. The noise descriptors used in this report are the DNL, Lmax, and SEL.

Appendix H provides additional noise-related information about the measurement and prediction of noise. This appendix also provides more information on the units used in describing noise as well as information about the effects of noise, such as annoyance, sleep interference, speech interference, and effects on animals.

3.4.4.1 Existing Noise Levels. Typical noise sources in and around airfields usually include aircraft, surface traffic, and other human activities. There has been essentially no noise generated from air traffic in the vicinity of Chanute AFB since 1971, when the airfield was closed. At closure, it is assumed that the airfield will still be used very infrequently and only by general aviation aircraft; therefore, the closure baseline does not include aircraft-related noise.

Rail traffic on the ICR and surface traffic on local streets and highways are the existing primary sources of noise in the vicinity of Chanute AFB. The baseline noise levels in the vicinity of the base were established in terms of DNL by modeling the arterial roadways on and near the base using current traffic and speed characteristics. The noise levels generated by surface traffic were predicted using the model published by the Federal Highway Administration (1978). The noise levels are then presented as a function of distance from the centerline of the nearest road. In airport analyses, areas with DNL of 65 dB and above are considered in land use compatibility planning and impact assessment; therefore, the distances to areas with DNL of 65 dB and above were of particular interest.

Preclosure Reference. AADTs (Section 3.2.4, Transportation) were used to estimate preclosure noise levels (Table 3.4-6). Because the airfield is used so infrequently, aircraft-related noise was not included in the preclosure baseline. The traffic mix was assumed to be 96 percent cars, 3 percent medium trucks, and 1 percent heavy trucks. Thirteen percent of the traffic was assumed to be nighttime traffic.

Table 3.4-6. Data Used in Surface Traffic Noise Analysis

	Annual Average Daily Traffic (AADT) Preclosure	Annual Average Daily Traffic (AADT) Closure	Speed Assumed (mph)
U.S. 45 n/o Tanner	13,800	7,180	45
U.S. 45 s/o Tanner	10,700	5,500	55
Maplewood Dr.	8,700	2,400	35
Chandler Rd.	125	125	30
Township Rd. 1800E	325	325	30

The results of the roadway modelling analyzed for preclosure are presented in Table 3.4-7. The actual distances to the DNLs may be less than those presented in this table because the model does not account for the screening effects of intervening buildings, terrain, and walls.

Table 3.4-7. Distance to DNL from Roadway Centerline for the Preclosure Reference and Closure Baseline

Roadway	Distance (feet)	
	DNL 65	DNL 70
Preclosure		
U.S. 45 North	150	50
U.S. 45 South	190	60
Maplewood Dr.	60	*
Chandler Rd.	*	*
Township Rd. 1800	*	*
Closure		
U.S. 45 North	80	*
U.S. 45 South	100	40
Maplewood Dr.	*	*
Chandler Rd.	*	*
Township Rd. 1800E	*	*

* contained within roadway

The rail noise levels were predicted from published models and data (Saurenman et al., 1982; Swing and Pies, 1973; Hatano, 1982). The typical rail operations for the peak season were developed from AMTRAK and ICR schedules. For this analysis, rail operations were assumed as an average of 10 trains per day, with up to 3 locomotives and up to 100 cars, traveling at 20 to 40 mph. The tracks were assumed to be well maintained. The distances from the rail centerline to DNL 75, 70, and 65 are approximately 65, 180, and 435 feet, respectively.

Closure Baseline. The noise levels projected for the closure baseline were calculated using the traffic projections at base closure (Table 3.4-6). The results of the modelling for the roadways analyzed for the closure baseline are presented in Table 3.4-7. Again, the actual distances to the DNLs may be less than those presented in the table, because the model does not account for screening effects of intervening buildings, terrain, and walls.

Rail traffic for the closure baseline was assumed to be the same as for the preclosure reference; therefore, the DNL distances would not change.

3.4.4.2 Noise-Sensitive Areas. The ROI for Chanute AFB includes noise-sensitive receptors such as residential units, hospitals, classrooms, parks, and golf courses. The Federal Interagency Committee on Urban Noise (1980) developed land use compatibility guidelines for noise. Table 3.4-8 provides recommended DNL ranges for various land use categories based on this committee's findings. The distance to DNL 65 dBA is typically less than 60 feet from the centerline of local streets and 190 feet or less from U.S. 45 (Table 3.4-7). No noise-sensitive receptors have been identified near Chanute AFB that are within an area of incompatible noise levels. Section 3.2.3, Land Use and Aesthetics, describes land uses on and near the base.

3.4.5 Biological Resources

Biological resources include the native and naturalized plants and animals in the project area. For discussion purposes, these are divided into vegetation, wildlife (including aquatic biota), threatened or endangered species, and sensitive habitats. Past and present land use practices have greatly altered the natural environment in the vicinity of Chanute AFB, primarily through replacement of native vegetation with agricultural crops and ornamental landscape species. This, in turn has changed wildlife populations present, through habitat degradation.

The ROI used for discussing the biological resources present and potential impacts on these resources is the base and the surrounding area within about 5 miles of the base. This includes the area within which potential impacts could occur and provides a basis for evaluating the level of impact.

3.4.5.1 Vegetation. The project area was historically a wet, tall grass prairie with little natural surface drainage (Short and Joseph, 1987). Channelization of natural drainages, installation of tile drains, and conversion of the prairie to agriculture and urban areas have eliminated the native vegetation in most of the region. Isolated patches of native vegetation remain along the railroad, fence rows, and streams. In addition, local people occasionally plant native grass seeds in areas that are not cultivated or landscaped in the ROI. The drier conditions favor herbaceous species such as prairie blazing star (*Liatris* sp.), smooth aster (*Aster* sp.), goldenrod (*Solidago* sp.), prairie violet (*Viola pedatifida*), and white wild indigo (*Baptisia leucantha*).

Land surrounding Chanute AFB on the west, south, and east is now intensively farmed. The primary crops are corn, soybeans, wheat, and hay. Vegetation on the base includes cropland, a variety of landscaping, and small areas of wetland/riparian vegetation associated with a tributary to Upper Salt Fork Drainage Ditch and several ponds. Figure 3.4-2 shows the vegetation on and adjacent to the base. The *Landscape Development Plan* and the *Cropland Management Plan* (U.S. Air Force, 1986a) have provided the basis for managing vegetation resources on the base. Prior to base closure, about 300 acres of cropland in the central part of the base surrounding the runways are being leased for production of corn and soybeans. This area will likely continue to be farmed at base closure.

Table 3.4-8. Land Use Compatibility Guidelines in Aircraft Noise Exposure Areas

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

Land Use	DNL 65-70	DNL 70-75	DNL 75 and above
RESIDENTIAL			
Residential, other than mobile homes/transient lodgings	NLR required ¹	NLR required ¹	Incompatible
Mobile home parks	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required ¹	NLR required ¹	NLR required
PUBLIC USE			
Schools, hospitals, and nursing homes	NLR required ¹	Incompatible	Incompatible
Churches, auditoriums, and concert halls	NLR required ¹	NLR required	Incompatible
Government services	Compatible	NLR required	NLR required
Transportation	Compatible	Compatible ²	Compatible ²
Parking	Compatible	Compatible ²	Compatible ²
COMMERCIAL			
Offices, business and professional	Compatible	NLR required	NLR required
Wholesale and retail-building materials, hardware and farm equipment	Compatible	Compatible ²	Compatible ²
Retail trade - general	Compatible	Compatible	NLR required
Utilities	Compatible	Compatible ²	Compatible ²
Communication	Compatible	Compatible	NLR required
MANUFACTURING AND PRODUCTION			
Manufacturing, general	Compatible	Compatible ²	Compatible ²
Photographic and optical	Compatible	NLR required	NLR required
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming, and breeding	Compatible	Compatible	Incompatible
Mining and fishing, resource production and extraction	Compatible	Compatible	Compatible
RECREATIONAL			
Outdoor sports arenas and spectator sports	Compatible	Compatible	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible

Compatible: Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable space, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

NLR: Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 dB. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior level of noise would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior level of noise would be about DNL 50, so an additional NLR of 5 dB would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

Incompatible: Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise exposure, even if special attenuating materials were to be used in the construction of the building.

¹ The land use is generally incompatible and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.

² NLR required in offices or other areas with noise sensitive activities.

Source: Derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations (FAR) Part 150, "Airport Noise Compatibility Planning," Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985.

Vegetation and Habitat

Chanute AFB
Rantoul, Illinois

EXPLANATION

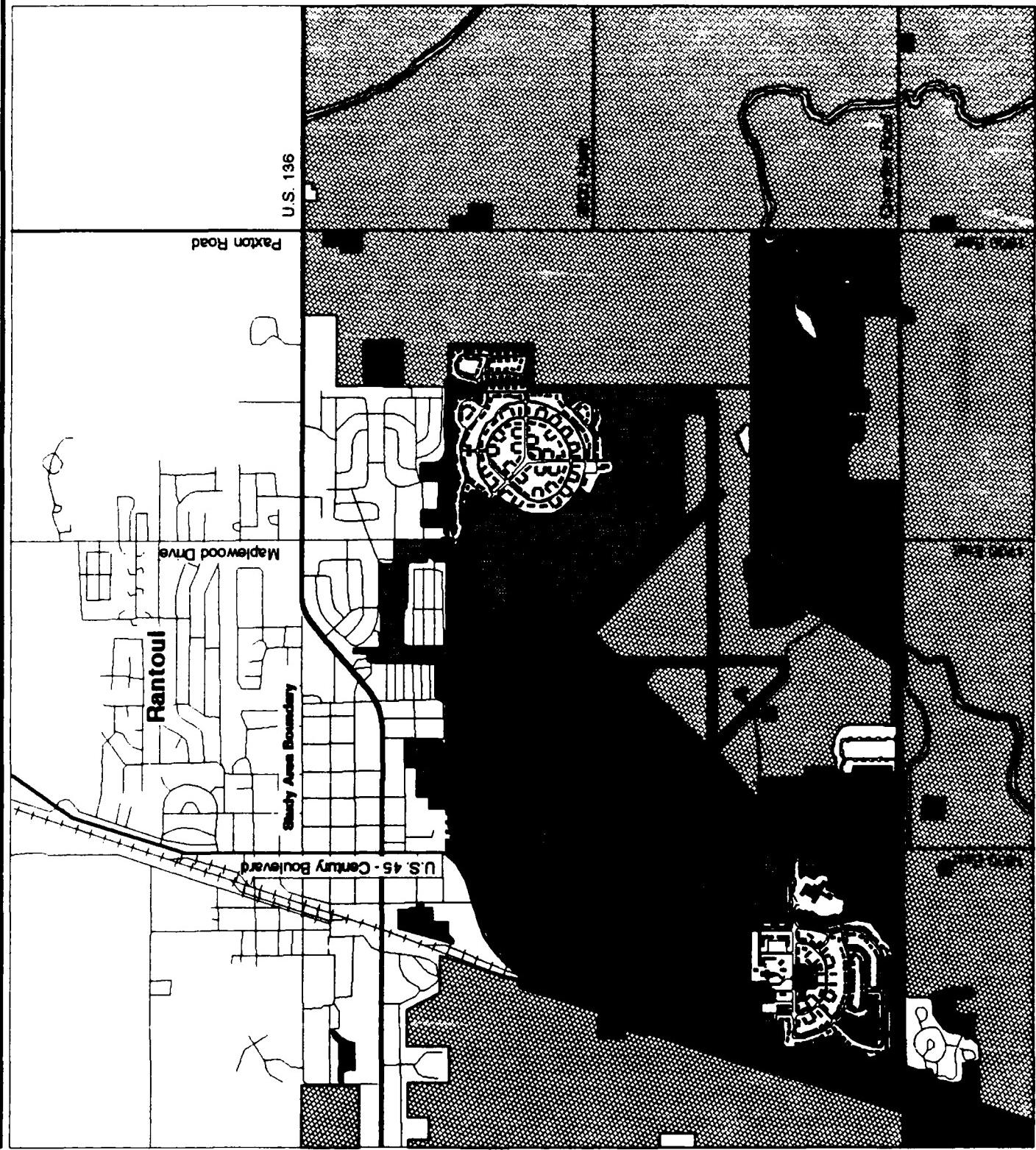
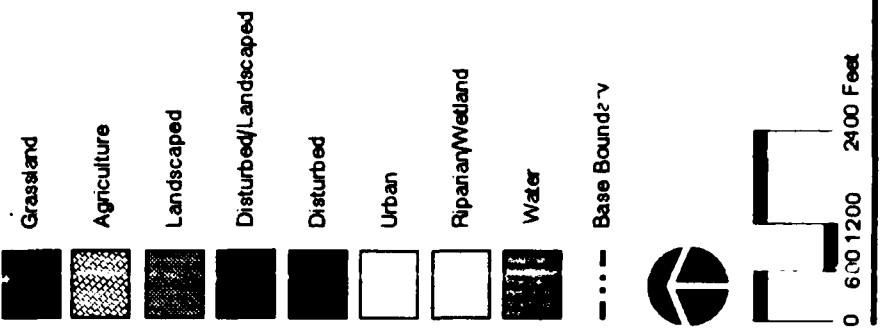


Figure 3.4-2

Portions of the base that are not paved or covered by buildings or ponds are landscaped (about 245 acres) or consist of grassland (about 600 acres). A variety of ornamental grasses, trees, and shrubs have been used for landscaping the base. Trees have been planted along streets and walkways as well as in lawns, and shrubs were used around buildings. Many of the shrubs, however, have not survived and were not replaced (Penny and Harkness, 1984). Some trees have also been planted to form parkland buffers and wind/snow belts. These wooded areas comprise a total of 12 acres on the base. Trees present include flowering crabapple (*Pyrus* sp.), autumn olive, gray dogwood (*Cornus foemina*), cherry (*Prunus* sp.), and other berry or fruit-producing species. The golf course is planted in turf grasses, and the three ponds support emergent and aquatic vegetation such as spikerush (*Eleocharis erythropoda*), pondweed (*Potamogeton foliosus* and *P. nodosus*), and soft-stem bulrush (*Scirpus validus*) around their margins. This vegetation, however, is regularly removed by mowing and use of herbicides (Ulaszek and Brooks, 1990).

A recreational lake, Heritage Lake, of about 20 acres was developed on base in 1983-1984. The amount of emergent vegetation along its edges is minimal because the inner banks are lined with riprap, very little shallow area (less than 3 feet deep) is present, and nutrient levels are relatively low.

A tributary to Upper Salt Fork Drainage Ditch crosses the southeastern part of the base and supports a narrow riparian corridor about 75 feet wide. Species planted to improve the riparian habitat include autumn olive, sumac (*Rhus* sp.), dogwood, multiflora rose (*Rosa multiflora*), and bush honeysuckle (*Lonicera* sp.) (Kimball, 1990). Emergent vegetation within the channel includes yellow marsh cress (*Rorippa palustris*), river bulrush (*Scirpus fluviatilis*), common cattail (*Typha latifolia*), and water smartweed (*Polygonum amphibium*). Other species found on bars within the channel and along the banks include sandbar willow (*Salix exigua*), green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), barnyard grass (*Echinochloa* sp.), redtop (*Agrostis alba*), reed canary grass (*Phalaris arundinacea*), and sawtooth sunflower (*Helianthus grosseserratus*) (Ulaszek and Brooks, 1990). The total area of riparian and wetland habitat along the stream is approximately 18 acres. Wetlands are discussed under sensitive habitats in Section 3.4.5.4.

Grasslands cover about 600 acres of the base. The vegetation is primarily introduced grasses and is mowed regularly. Native prairie grasses may be present in areas that have not been disturbed for several years. Prairie grasses present in the region that commonly recolonize areas with little disturbance include big bluestem, little bluestem (*Andropogon scoparius*), Indian-grass (*Sorghastrum avenaceum*), side-oats grama (*Bouteloua curtipendula*), prairie dropseed (*Sporobolus heterolepis*), Canadian rye grass (*Elymus canadensis*), and switchgrass (*Panicum virgatum*). The only known prairie grasses in the area are along U.S. 45 and the ICR.

For clarification purposes, several other categories are presented on the vegetation map (Figure 3.4-2). Non-vegetated areas that are paved (e.g., roads, parking lots, airfield), graded or filled, and covered with structures are classified as disturbed habitat (approximately 280 acres). Residential areas on the base are classified as urban (a mixture of disturbed and landscaped). In Rantoul, those residential and commercial industrial areas are included in the urban category. Other areas on the base (350 acres) are a mosaic of disturbed habitat and landscaped (i.e., educational/training, industrial, and the partially landscaped recreation area around Heritage Lake).

3.4.5.2 Wildlife Resources. Wildlife populations in the project area have been altered as a result of changes in habitat. The abundance of species associated with the original prairies has been greatly reduced whereas species tolerant of agriculture and urbanization have increased in abundance. Many of the latter are not native to this area (e.g., ring-necked pheasant, *Phasianus colchicus*). Common mammals in the area include squirrels (*Sciurus spp.*), eastern cottontail rabbit (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), mink (*Mustela vison*), house mouse (*Mus musculus*), red fox (*Vulpes fulva*), muskrat (*Ondatra zibethica*), and beaver (*Castor canadensis*). Four species of bat have been reported from the Rantoul area: red bat (*Lasiurus borealis*), hoary bat (*L. cinereus*), silver-haired bat (*Lasionycteris noctivagans*), and big brown bat (*Eptesicus fuscus*) (U.S. Air Force, 1990c; Illinois Fish and Wildlife Information System, 1990). Their occurrence on the base is limited by the amount of habitat available. Hunting is no longer allowed on the base, but one permit is issued each year for trapping. Species taken in 1988 included muskrat (10), beaver (2), and mink (1).

Chanute AFB is located on the edge of the Mississippi flyway and, as a result, a variety of migratory waterfowl may be seasonally present in the area. Canada geese (*Branta canadensis*) and mallard ducks (*Anas platyrhynchos*) migrate from southern Wisconsin to southern Illinois from September to mid-January and return from mid-February to late March. Use of the ponds, lake, and cropland on the base by some of these birds is expected, but the habitat available is not suitable for large numbers of waterfowl. Other water-associated birds, such as the great blue heron (*Ardea herodias*), may forage on the base. Numerous songbirds are present in the region, some as yearlong residents and others as seasonal visitors. Common species expected to occur on or near the base include house sparrow (*Passer domesticus*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), woodpeckers, horned lark (*Eremophila alpestris*), dickcissel (*Spiza americana*), cedar waxwing (*Bombycilla cedrorum*), Carolina wren (*Thryothorus ludovicianus*), and American crow (*Corvus brachyrhynchos*). Raptors that commonly frequent agricultural areas include the American kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*). Neither of these nor any other species of raptor present in the region is known to nest within base boundaries.

Aquatic habitats in the region are primarily stock ponds and small streams in the Vermillion River drainage basin. On the base, aquatic habitats are limited to

three man-made ponds on the golf course (2 acres each), Heritage Lake (also man-made), and a tributary of Upper Salt Fork Drainage Ditch. One of the ponds was constructed in 1954, and the other two were built in 1960. The water level is maintained by irrigation. These ponds were stocked with fish, but no records were kept until 1979 when redear sunfish (*Lepomis macrolophus*) were introduced. Carp (*Cyprinus carpio*) were also planted in the west pond. There has been no fishing for a number of years because golf balls from the nearby golf course pose a safety hazard to the fishermen.

Heritage Lake was constructed in 1984 from two abandoned sewage lagoons. The water surface is above the general land elevation so runoff to the lake is minimal. The water level is maintained by the addition of well water.

Largemouth bass (*Micropterus salmoides*), bluegill sunfish (*Lepomis macrochirus*), redear sunfish, crappie (*Pomoxis* spp.), and channel catfish (*Ictalurus punctatus*) have been stocked in the lake. Rainbow trout (*Oncorhynchus mykiss*) were stocked for put-and-take fishing in 1985 and 1986. Fishing is regulated by the base; catch limits are three catfish (14 inches or longer) and three bass (minimum of 15 inches) per person per day.

Approximately 1.9 miles of the tributary to Upper Salt Fork Drainage Ditch crosses the southeastern portion of the base. Much of the runoff from the base enters this perennial stream; discharge of treated sewage has been discontinued. Approximately 1 mile downstream from the base boundary, the stream channel averages 13 feet wide and 0.6 feet deep. The stream velocity in June 1989 was 0.2 feet/second. The substrate is a mixture of small cobbles, large cobbles, fine gravel, and claypan (Short, 1989). The macroinvertebrate fauna in June 1989 comprised eight taxa and was dominated by mayfly nymphs (Heptageniidae).

3.4.5.3 Threatened and Endangered Species. A number of state and federally listed threatened or endangered species are present within 50 miles of Chanute AFB (Table 3.4-9) (U.S. Air Force, 1990c). The upland sandpiper is the only state-listed species known or expected on the base (Illinois Fish and Wildlife Information System, 1990). A survey conducted by the Illinois Natural History Survey in May 1991 found no upland sandpipers in grasslands on or adjacent to the base. Upland sandpipers nest in pastures and hay fields from April to September. Little suitable nesting habitat is present in the vicinity of Chanute AFB (Malmborg, 1991). The closest known nesting site observed in recent years is about 20 miles south of the base (U.S. Air Force, 1990c). Correspondence from the Illinois Department of Conservation concurs that there are no known records of state-listed species or natural areas near or in the project area.

No candidates for federal listing are known or expected on the base. The federally listed Indiana bat requires well-developed riparian habitat, which is not found on or near the base. A letter requesting a species list for the project area was sent to the U.S. Fish and Wildlife Service (USFWS) in compliance with the Endangered Species Act. Their response indicates that no listed or candidate

Table 3.4-9. Threatened and Endangered Species in the Vicinity of Chanute AFB

Species	Federal ^(a)	STATUS State ^(b)
Bald eagle (<i>Haliaeetus leucocephalus</i>)	E	E
Indiana bat (<i>Myotis sodalis</i>)	E	E
Peregrine falcon (<i>Falco peregrinus</i>)	E	E
Upland sandpiper (<i>Bartramia longicauda</i>)	—	E
Bigeye chub (<i>Hybopsis amblops</i>)	—	E
River redhorse (<i>Moxostoma carinatum</i>)	—	T
Northern madtom (<i>Noturus stigmosus</i>)	—	E
Bluebreast darter (<i>Etheostoma camurum</i>)	—	E
Silvery salamander (<i>Ambystoma platineum</i>)	—	E

(a) A taxon is classified as endangered (E) when it is in danger of extinction throughout all or a significant portion of its range. The threatened (T) category signifies that the taxon is likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

(b) E = in danger of extinction as a breeding species in Illinois. T = a breeding species that is likely to become endangered in the foreseeable future.

species are known to occur on or near Chanute AFB (U.S. Fish and Wildlife Service, 1990).

3.4.5.4 Sensitive Habitats. Sensitive habitats include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, or crucial winter habitat). At Chanute AFB, wetlands are the only such habitat found on the base.

In 1989, the USFWS, Army Corps of Engineers (ACOE), EPA, and SCS cooperatively published a manual for identifying and delineating jurisdictional wetlands (Federal Interagency Committee for Wetland Delineation, 1989). Jurisdictional wetlands possess three essential characteristics (hydrophytic vegetation, hydric soils, and wetland hydrology) and are subject to Section 404 of the federal Clean Water Act and to the swampbuster provision of the federal Food Security Act. According to the ACOE, wetlands are areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Areas that are periodically wet but do not meet all three criteria are not jurisdictional wetlands. Although the National Wetland Inventory (NWI) maps were prepared primarily from aerial photographs using slightly different criteria, they are useful in determining the potential for wetlands on a site.

The USFWS NWI maps indicate the presence of several wetlands on and adjacent to the base. In September of 1990, the Illinois Natural History Survey examined potential wetlands in the southeastern part of the base. Routine on-site wetland determinations were performed and four sites were found to be jurisdictional wetlands (Ulaszek and Brooks, 1990). A total of about 12 acres of

wetlands occur on base. These sites are the tributary to Upper Salt Fork Drainage Ditch and three low areas adjacent to the stream (Figure 3.4-3). The tributary to the Salt Fork Creek flows eastward through the southern portion of the 235-acre parcel that would be used for runway extension. Based on a review of NWI maps and aerial photography, the IDOT has concluded that wetlands are present in the off-base area proposed for acquisition (Illinois Department of Transportation, 1991).

The stream channel contains a series of vegetated bars dominated by sandbar willow and reed canary grass. Many of the other species present are described above under aquatic biota. Obligate wetland species (species that appear only in wetland habitats) present are yellow marsh cress, river bulrush, common cattail, water smartweed, and sandbar willow.

The depression just north of the stream and Perimeter Road is a scrub-shrub palustrine wetland dominated by sandbar willow and Virginia wild rye (*Elymus virginicus*). Other wetland species present include water hemp (*Amaranthus tuberculatus*), barnyard grass, water smartweed, American germander (*Teucrium canadense*), and riverbank grape (*Vitis riparia*). The depression southeast of the aircraft parking apron is an emergent palustrine wetland. Dominant species are redtop, two sedges (*Carex cristatella* and *C. lanuginosa*), Kentucky blue grass (*Poa pratensis*), and sandbar willow. All of these, except the Kentucky blue grass, are facultative (usually but not always found in wetland habitats) or obligate wetland species. Other obligate wetland plants present include nodding bur-marigold (*Bidens cernua*), water smartweed, and spotted smartweed (*Polygonum punctatum*). The third depression is also an emergent palustrine wetland, but the dominant species are common cattail and green bulrush (*Scirpus atrovirens*). This habitat is apparently fed by groundwater seepage; the other two depressions are flooded primarily by surface runoff.

Several hazardous waste sites (refer to Section 3.3 and 3.4.2) are located near the wetlands on Chanute AFB and may currently or in the future influence the quality of these habitats. A small wetland is very close to Landfill Site 4. Landfill Site 1 and Fire Training Area 1 are within about 20 feet of the stream and upgradient (for groundwater flow). Landfill Site 2 and Fire Training Area 2 are also very near the stream, but groundwater flow is away from the stream and no contamination of the wetland is likely.

3.4.6 Cultural Resources

Cultural resources consist of prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, religious, traditional, or other reason. For the purposes of this EIS, cultural resources also include paleontological remains.

Jurisdictional Wetlands

Chanute AFB
Rantoul, Illinois

EXPLANATION

- Jurisdictional Wetlands
- Base Boundary

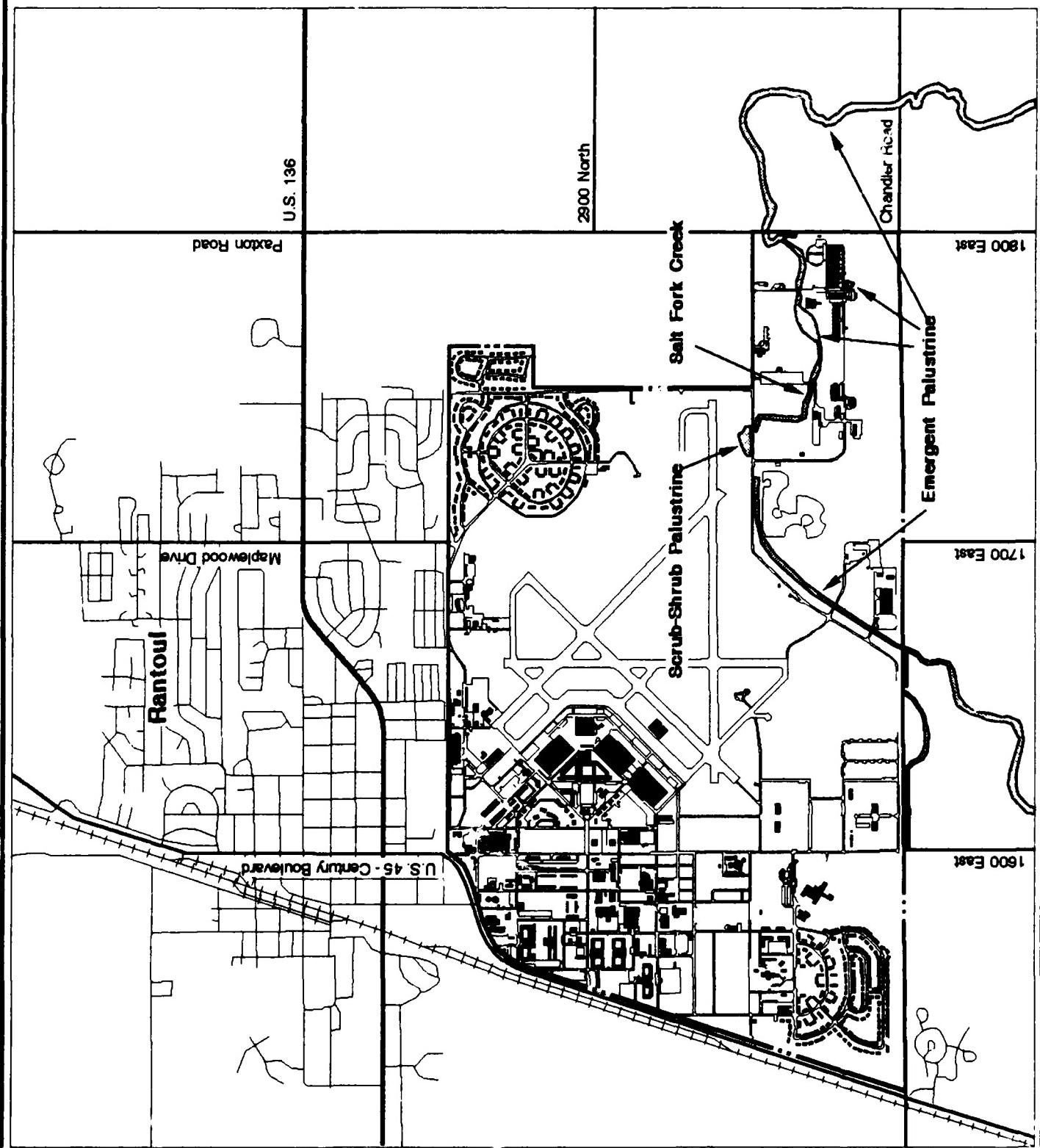
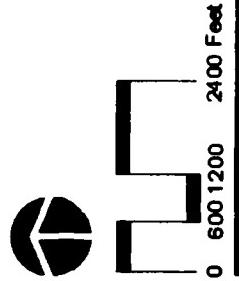


Figure 3.4-3

The ROI for this project includes all areas within the confines of Chanute AFB. It also includes areas marked for potential acquisition that might be disturbed as a direct or indirect result of base reuse. These off-site areas include about 600 acres immediately east of the base that are needed for runway expansion and potential aviation support areas (see Figures 2.2-1 and 2.3-1). The off-site areas also include areas affected by a new road and improvements to U.S. 136 required as a result of base reuse.

Numerous laws and regulations require federal agencies such as the Air Force to consider the effects of a proposed action on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationships among other involved agencies (e.g., State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation). Compliance with requirements of these laws and regulations ideally involves three basic steps: (1) identification of significant cultural resources that could be affected by the Proposed Action or its alternatives, (2) assessment of the impacts or effects of the proposed and alternative actions, and (3) development and implementation of measures to eliminate or reduce significant adverse impacts. The primary law designed to protect cultural resources is the National Historic Preservation Act (NHPA). Cultural resources, including paleontological remains, are also covered by requirements of the NEPA of 1969.

In compliance with the NHPA, the Air Force has initiated the Section 106 review process with the Illinois SHPO. As part of this review process, the Air Force has met with SHPO representatives and is preparing a Determination of Eligibility for historic and prehistoric resources on base, and an assessment of the effects of the project on cultural resources.

3.4.6.1 Archaeological Resources. An archaeological surface survey of Chanute AFB was conducted 12 through 14 May 1987 by archaeologists from the Illinois Historic Preservation Agency. The resulting letter report (Illinois Historic Preservation Agency, 1987) indicates that no significant archaeological resources are located within the base. Archaeological surveys of off-site areas that may be affected by runway expansion and road improvements off base have been conducted by the IDOT (Illinois Department of Transportation, 1991). The surveys indicate that cultural resources are not located in the area to be affected by runway expansion and associated roadway construction and modification. A survey of off-base areas that could be affected by maintenance facilities concluded that no archaeological or historic sites of significance are present in the area (Illinois Department of Transportation, 1991).

3.4.6.2 Historic Resources. The significance of a cultural resource is based on its eligibility for inclusion on the National Register of Historic Places (NRHP), which documents the appearance and importance of districts, sites, buildings, structures, and objects significant in prehistory and history. As a guide in the evaluation of properties, the National Park Service (NPS) has developed criteria that, when applied to properties that have been evaluated within a historic

context, are standards by which every nominated property is judged. NPS regulations (36 CFR § 60.4) impose three distinct requirements on properties eligible for listing on the NRHP. The three requirements are:

- **Properties must possess integrity.** The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association.
- **Properties must satisfy at least one of the National Register criteria.** The criteria are as follows:
 - A. Properties that are associated with events that have made a significant contribution to the broad patterns of our history; or
 - B. that are associated with the lives of persons significant in our past; or
 - C. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
 - D. that have yielded, or may be likely to yield, information important in prehistory or history.
- **Properties should not, except under extraordinary circumstances, be among property types typically excluded from National Register consideration.** Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register.

In accordance with these requirements, 109 buildings and structures at Chanute AFB were evaluated in early 1991 to identify their historic context. Four historic contexts for these buildings were identified, the NRHP criteria were applied, and a Determination of Eligibility for listing on the NRHP was drafted. Preliminary results indicate that there is a potential historic district containing 31 buildings and one structure (flagpole), as well as a single building within the proposed district (Building 6) that is potentially eligible on individual merit (Figure 3.4-4). Photographs and Historic American Building Survey/Historic American Engineering Record (HABS/HAER) inventory cards were prepared by an architectural historian during an earlier study. None of the buildings or structures that were evaluated were previously listed on the NRHP, and there are no other NRHP properties on the installation. Coordination with the Illinois SHPO regarding these buildings and structures is in progress.

Buildings and structures that have been included in the potential historic district are representative of a period of rapid growth and change to the built environment at Chanute AFB that took place between 1938 and 1943. All of the buildings demonstrate qualities of design, style, construction technique/materials, and complementary function representative of a cohesive district that was influenced by mobilization for World War II and Chanute AFB's continuous

Chanute AFB Historic Buildings and Structures

Chanute AFB
Rantoul, Illinois

EXPLANATION



Building 6 - Potentially
Eligible on Individual
Merit*

Base Boundary

* Coordination with the Illinois
State Historic Preservation
Officer is in progress.

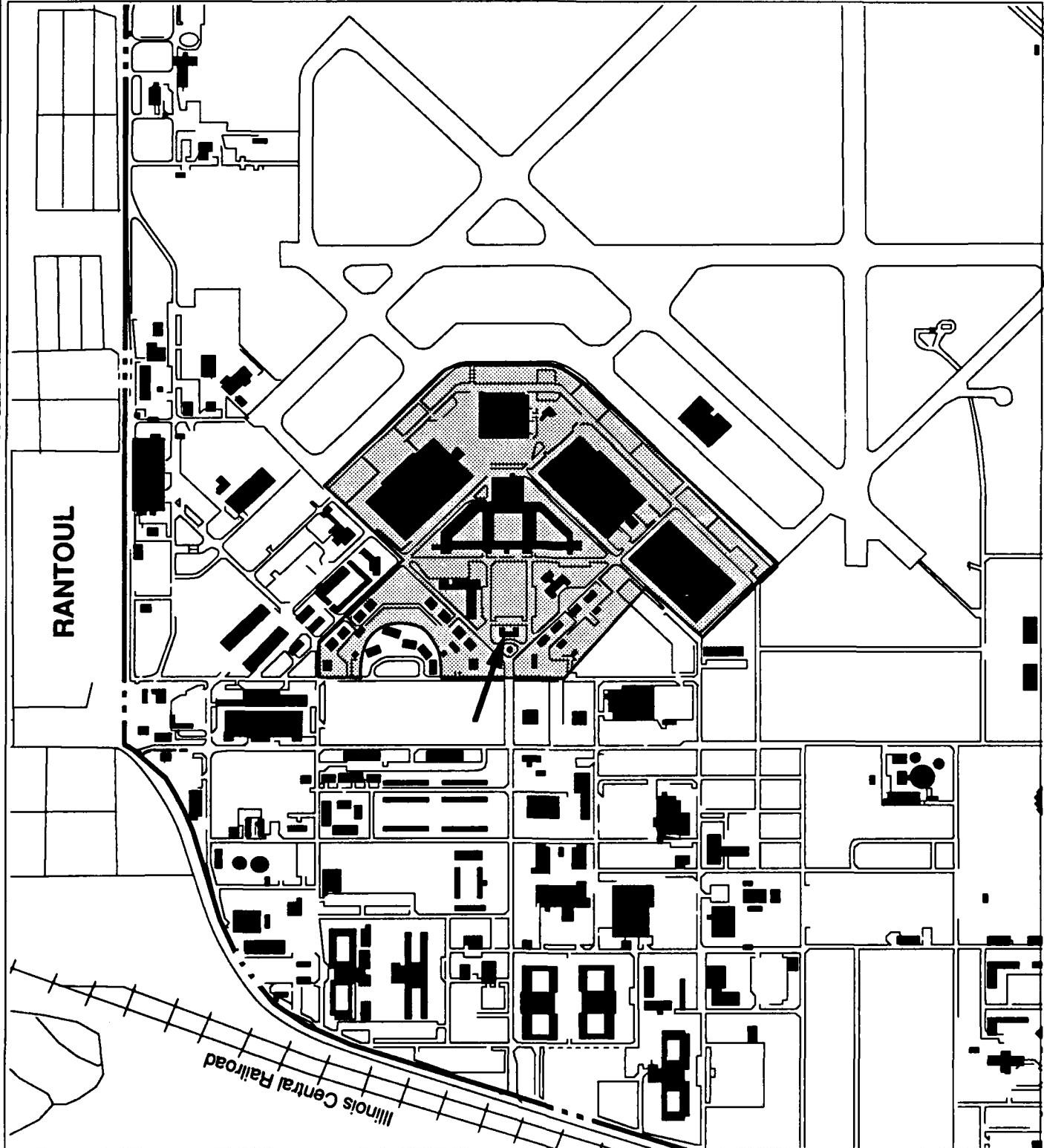
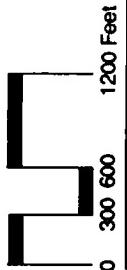


Figure 3.4-4

mission as a technical training center. Because there have been extensive modifications and/or deterioration, no other buildings on the installation are considered eligible.

3.4.6.3 Native American Resources. The archaeological survey of the base identified only a single artifact of Native American origin. The dearth of Native American artifacts and areas indicates that the area encompassed by the base is not of special interest to Native Americans with past or present ties to that area.

3.4.6.4 Paleontological Resources. The Quaternary deposits underlying the base (Section 3.4.1.2) contain no known concentrations of fossil remains. Small fragments of mammoth, mastodon, giant beaver, and other vertebrate remains are found in such deposits but such finds are rare and isolated. In the Rantoul/Chanute AFB area, encountering fossils in surficial soils would be extremely unlikely. Some fossiliferous units occur in the underlying Paleozoic bedrock (Willman et al., 1975) but no local outcrops occur within 50 miles of the base.



CHAPTER 4

ENVIRONMENTAL IMPACTS

4.0 ENVIRONMENTAL IMPACTS

4.1 INTRODUCTION

This section discusses the potential environmental impacts associated with the Proposed Action and alternatives. To provide the context in which potential environmental impacts may occur, discussions of potential changes to the local communities, including population, land use and aesthetics, transportation, and community and public utility services are included in this EIS. In addition, issues related to current and future management of hazardous materials and wastes are discussed. Both short- and long-term impacts to the physical and natural environment are evaluated for geology and soils, water resources, air quality, noise, biological resources, and cultural resources. These impacts may occur as a direct result of disposal and reuse actions or as an indirect result of induced changes to the local communities. Cumulative impacts and possible mitigation measures to minimize or eliminate the environmental impacts are also presented.

Cumulative impacts result from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (Council on Environmental Quality, 1978). The only other known project in the area that could contribute to cumulative impacts is the disposal of Chapman Court Military Family Housing. Cumulative impacts are discussed by resource in this chapter.

Means of mitigating adverse environmental impacts of the Proposed Action and alternatives are discussed, as required by the NEPA. Potential mitigation measures depend upon the particular resource affected. In general, however, mitigation measures are defined in CEQ regulations as actions that include:

- "(a) Avoiding the impact altogether by not taking a certain action or parts of an action
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementations
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- (e) Compensating for the impact by replacing or providing substitute resources or environments."

4.2 LOCAL COMMUNITY

This section discusses potential effects on local communities from the disposal and reuse of Chanute AFB.

4.2.1 Community Setting

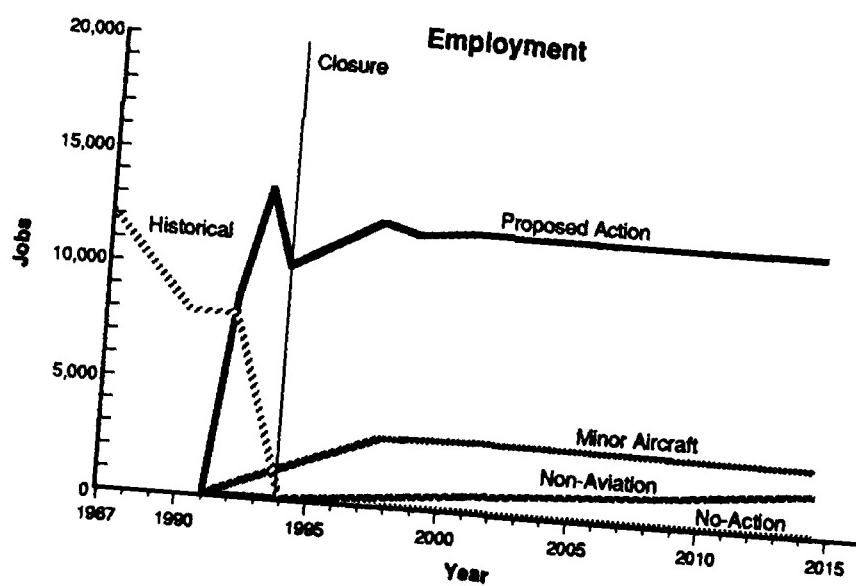
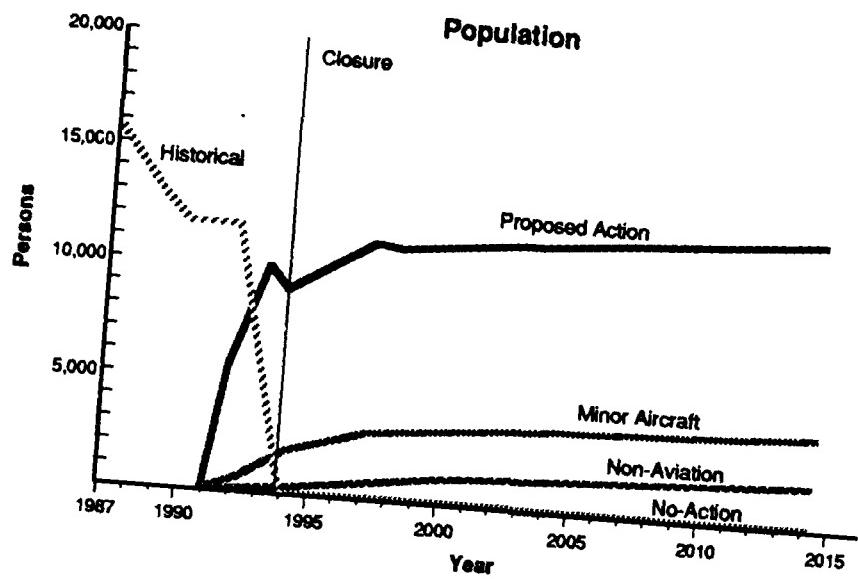
Socioeconomic effects will be addressed only to the extent that they pertain to the biophysical environment. A complete assessment of socioeconomic effects is presented in the *Socioeconomic Impact Analysis Study* (U.S. Air Force, 1991b).

4.2.1.1 Proposed Action. Full conversion of Chanute AFB property to civilian use is estimated to occur over approximately 20 years. The redevelopment of this property into civilian aviation-related, institutional, and commercial uses would cause many changes to the local community.

It is estimated that employment in the ROI would decline in 1994 as the base closes and construction associated with reuse under the Proposed Action is completed. Subsequently, employment would increase; the redevelopment activities at Chanute AFB under the Proposed Action would generate approximately 6,050 direct and over 6,000 indirect jobs in Champaign and southern Ford counties by the year 2014. Figure 4.2-1 shows the employment effects that would result from the Proposed Action and other alternatives. Regional employment is projected to be 115,970 at closure and approximately 142,110 in 2014 under the Proposed Action. The long-term employment effects from the Proposed Action would represent a 10-percent increase from closure. Direct jobs would be located in Rantoul at the disposed-of Chanute AFB property whereas secondary jobs would be created throughout Champaign and southern Ford counties.

Population in Champaign and southern Ford counties would similarly decrease in 1994 and then increase as a result of new civilian jobs associated with reuse activities. The population in Champaign and Ford counties is projected to be approximately 175,810 in 1994 and approximately 188,320 in 2014. The long-term population change associated with the Proposed Action represents a 7-percent increase from 1994. Figure 4.2-1 shows a comparison of population immigration for the Proposed Action and other alternatives. The largest number of immigrants are expected to locate in Champaign County. Communities likely to experience the largest increases in population include Rantoul, Champaign, and Urbana.

Base redevelopment under this alternative would generate positive economic benefits in the region in the form of increased employment and earnings.



Site Related Regional* Population and Employment Effects

* Data refers to population and employment impacts within Champaign and Ford Counties directly or indirectly related to the Chanute AFB site.

Chanute323-2

Chanute AFB
Rantoul, Illinois

Figure 4.2-1

4.2.1.2 Minor Aircraft Maintenance Operations Alternative. The levels of economic activities for this alternative would be less than those reported for the Proposed Action. Employment would increase in 1994, as operations and construction related to this alternative continue and expand. It is projected that redevelopment of Chanute AFB under this alternative would generate approximately 1,880 direct and 1,400 indirect jobs in Champaign and southern Ford counties by the year 2014. These employment figures are considerably less than those projected for the Proposed Action, but represent an approximately 3-percent increase from closure levels. For comparison, these employment figures would represent 88 percent of the preclosure employment associated with Chanute AFB in FY 87.

Regional population under this alternative is projected to increase to approximately 168,600 in 1994 and to approximately 180,160 in the year 2014. This represents a 6.9-percent increase in population over the 20-year period.

4.2.1.3 Non-Aviation Alternative. Redevelopment activities associated with this alternative are expected to generate approximately 1,230 direct and 150 indirect jobs in Champaign and southern Ford counties by the year 2014. This represents an increase of approximately 1 percent over the employment figures projected at closure. For comparison, these employment figures would represent 12 percent of the preclosure employment associated with Chanute AFB in FY 87.

Regional population under this alternative is projected to be approximately 167,140 in 1994 and 177,850 in the year 2014. This represents an approximately 6.4-percent increase in population from 1994 to 2014. The major differences between this alternative and the two previous alternatives is the level of activities and timing of immigration. For this alternative, the level of activity is considerably lower than that of the previous alternatives and immigration would not begin until 1994, after the base is closed. In the two previous alternatives, immigration would begin in 1992, prior to complete base closure.

4.2.1.4 No-Action Alternative. Under the No-Action Alternative, only disposal management activities would occur at the base. It is estimated that these activities at Chanute AFB will maintain approximately 50 direct and 20 secondary jobs in Champaign and Ford counties through the year 2014. This represents no change from closure conditions because the No-Action Alternative requires no additional jobs beyond those required at closure. A 12 percent increase in regional population is projected from non-site-related growth. Under the No-Action Alternative, the estimated regional population in Champaign and Ford counties will be approximately 167,050 in 1994 and approximately 176,340 in 2014. This represents an increase of approximately 5-1/2 percent over the 20-year period.

4.2.2 Land Use and Aesthetics

In this section the Proposed Action and alternatives are discussed in terms of land use and zoning to determine potential impacts. The following parameters were used in determining the sensitivity of the land use changes:

- **Land Use Conflicts.** The particular site reuse proposed could conflict with on-base and off-base land use.
- **Zoning Conflicts.** There could be conflicts between the proposed reuse and zoning.

Projected population and employment effects on land uses in the Village of Rantoul are discussed in the *Socioeconomic Impact Analysis Study*.

4.2.2.1 Proposed Action

Land Use. The on-base land uses of the Proposed Action are generally consistent with the existing on-base land uses, except for the following potential conflicts (see Figure 4.2-2):

- The proposed commercial land use in the northwest corner of the base conflicts with the existing public facilities (i.e., the two water towers, electrical substation, and water supply filtration building) and the railroad spur. The proposed land use also conflicts with the new cold storage building.
- The proposed industrial and aviation support land uses in the southeast area of the base conflict with existing IRP sites.
- The proposed airfield land use conflicts with the abandoned sewage treatment plant located about 1,200 feet west of Runway 9/27, which exceeds the 35-foot height limit for buildings in the clear zone.
- The Proposed Action would require easements totaling 2 acres at the north end and 7 acres at the south end of Runway 18/36. These areas include the Runway Protection Zone (RPZ) and future land uses and activities may be restricted. FAR Part 77 regulations control the heights and locations of structures and recommend types of activities that can occur in the zone to minimize safety hazards. Use of these areas would not generate a major impact.

The off-base land uses of the Proposed Action are generally consistent with the existing off-base land uses, except for the following potential conflicts (see Figure 4.2-2):

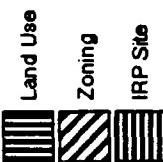
- The off-base acquisition areas are adjacent to Rantoul's municipal boundary and contain lands designated as "prime farmland." The evaluation of these impacts is described below.
- The proposed use of off-base land for an aviation maintenance facility will affect a farm complex with three inhabited dwellings. Daytime and nighttime operations at the maintenance facility would create possible land use conflicts with the adjacent on-base residential area.

Land Use Conflicts- Proposed Action

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

Land Use Conflicts



Land Uses

- | | |
|---|--------------------------------------|
| ① | Airfield |
| ② | Aviation Support |
| ③ | Institutional (Educational/Training) |
| ④ | Industrial |
| ⑤ | Institutional (Medical) |
| ⑥ | Commercial |
| ⑦ | Public/Recreation |
| ⑧ | Residential |
- Base Boundary
— Road Improvements



0 600 1200 2400 Feet

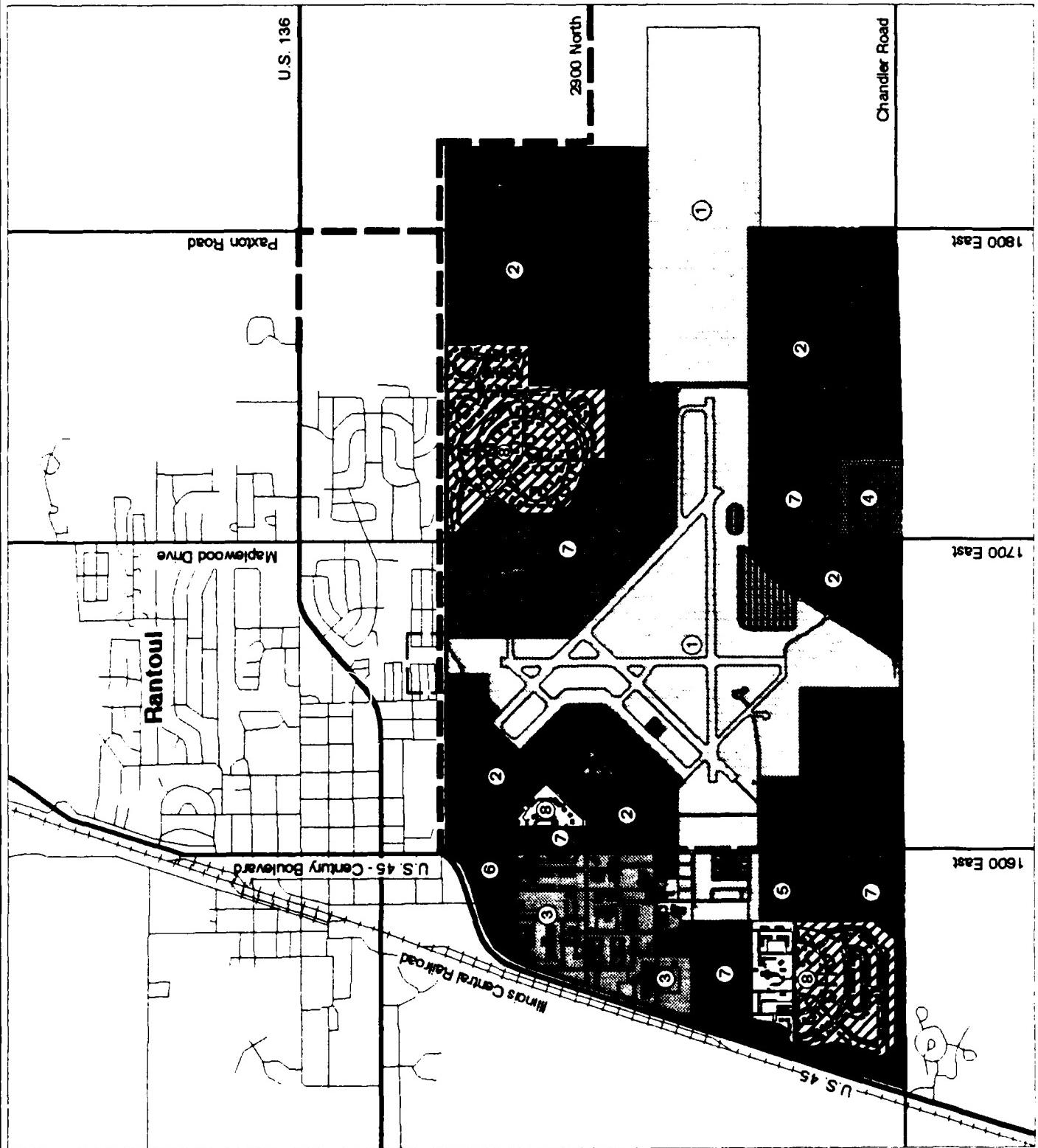


Figure 4.2-2

- Off-base land uses would be affected by the new roads and/or road expansion required in order to relieve traffic congestion related to the increased population and employment in the project area. Additional expansion is planned for portions of U.S. 136, Township Road 1800 East from U.S. 136 to the off-base major maintenance facility, and 2900 North west from 1900 East. The land use along these roads is agricultural, except for a church on the west side of Township Road 1800 East. Expansion along other roads may also be required.
- Aviation easements would have to be acquired for a total of 20 acres off base at the north end of Runway 18/36. These areas include the RPZ and future land uses and activities may be restricted. FAR Part 77 regulations control the height and locations of structures and recommend types of activities that can take place in the zone to minimize safety hazards. Use of these areas would not generate a major impact.

Land use compatibility with aircraft noise is discussed in Section 4.4.4.

The Federal Farmland Protection Policy Act (FFPA), 7 U.S.C. § 4201 et seq., directs federal agencies to take into account the adverse effects of federal programs on the preservation of farmland; considers alternative actions, as appropriate, that could lessen such adverse effects; and assures that such federal programs, to the extent practicable, are compatible with state, unit of local government, and private programs and policies to protect farmland. In developing the guidelines to be used in this process, the implementing regulations (7 C.F.R. Part 658) provide that where the state in which the project will occur has developed an approved Land Evaluation and Site Assessment (LESA) system, the federal agencies use that system to make their evaluation. The Illinois Department of Agriculture was asked to review the project in light of the Illinois Farmland Preservation Act (Ill. Rev. Stat. Ch. 5, para. 1301-1308 [1989]) and conduct a site evaluation to determine whether the project was in compliance. The Illinois Department of Agriculture completed its evaluation and concluded that proposed conversion of farmland would be in compliance with state law (Appendix E).

In accordance with the FFPA, 7 U.S.C. § 4201 et seq., and the implementing regulations, 7 C.F.R. Part 658, the impacts of the Proposed Action on farmlands have been evaluated. The agricultural lands impacted by this proposal are outside the boundaries of Chanute AFB and would be acquired to support development for aviation maintenance activities. Of this area, 231 acres would have to be acquired for runway extension and 345 acres would be acquired to support the major aviation maintenance facility. The evaluation was conducted using the Champaign County LESA approved for use by the U.S. Department of Agriculture, Soil Conservation Service (SCS) (Appendix E). A score of 163.2 was given to the farmland adjacent to Chanute AFB that is proposed for acquisition to support airport activities. Applying the criteria contained in the LESA results in a determination that the impacted lands have "a low rating for protection." Based on this score, it appears that utilization of this site would be consistent with the

intent of the FFPA that federal agencies minimize adverse impacts to agriculture from their projects and programs.

In developing the Airport Layout Plan, which is an integral part of the Proposed Action; the impacts on farmland were considered. The areas proposed for conversion were kept to the minimum necessary to support the project.

Remediation activities at existing on-base IRP sites may delay the transfer of properties (in the southeast quadrant of the base) from the Air Force, possibly restricting the timely reuse as follows:

- Industrial
- Aviation Support
- Airfield.

A more detailed discussion of IRP sites is provided in Section 4.3.1.

Zoning. The Proposed Action is generally consistent with the Village of Rantoul's zoning (adopted 22 January 1991) for the Chanute AFB property, except for the following potential conflicts:

- The proposed Institutional (educational) land use zone in the central portion of the base is in the Aviation Support District. The proposed aviation support land use zone adjacent to the southern hangar is in the Residential District and the proposed aviation support area west of Heritage Lake Park is in the Recreation District.
- The configuration of the residential areas may be in conflict with the subdivision requirements of the zoning ordinance.
- The new maintenance building height and scale may conflict with the adjacent smaller-scale residential areas. Additionally, the building height may conflict with the local zoning ordinance, which limits building height to 65 feet.

Aesthetics. The Proposed Action is not expected to have any adverse effects on features of medium visual sensitivity on base. No visual effects to Heritage Lake Park or to the base golf course would be expected because these resources are planned for reuse as a Village park and golf course. Additional parking facilities would have to be developed in the area to the west of White Hall, which is classified as of medium visual sensitivity, to accompany the reuse of the existing hangars for aircraft maintenance and training, thus reducing the amount of open space.

The Proposed Action would have minor visual effects off base, because little construction is planned. The only anticipated off-base visual impact would be the development of an aircraft maintenance facility adjacent to the base's east boundary. The existing residential area in the northwest corner of the base would be visually impacted by the large scale and the proximity of this facility.

Cumulative Impacts. The reuse of Chanute AFB along with the disposal of Chapman Court for residential development would not cause cumulative impacts to land use and aesthetics.

Mitigation Measures. The following measures may be implemented for the Proposed Action to mitigate on-base impacts:

- Additional parking facilities in the area north of White Hall could be sited so as not to infringe on the pleasant campus appearance of the cantonment area west of White Hall.
- The Air Force has committed to remediating all IRP sites. Active coordination between the Air Force's IRP representative and new construction planning agencies can mitigate potential problems. The presence of IRP sites may limit certain land uses at these sites.
- The Village of Rantoul may need to enact zoning to regulate development within the airfield safety zones.
- The FAA would be able to obtain a waiver in the airport layout plan for the abandoned sewage treatment plant in the clear zone of Runway 9/27.

The following measures may be implemented for the Proposed Action to mitigate off-base impacts:

- Because the development of the off-base areas of prime farmland is still tentative and no detailed plans for development are available, mitigation can be considered before development begins. Such mitigation can include analysis of siting requirements or redesign of infrastructure to minimize impacts.
- Real estate interests for 345 acres of land off base would have to be acquired for the maintenance facility. There is a farm complex with three inhabited dwelling units on this land. The inhabitants would have to be relocated and the structures demolished. The relocation of these families will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970. Comparable decent, safe, and sanitary dwellings are available on the open market or will be built, if necessary, prior to actual displacement.
- The right-of-way required for Township Road 1800 East should be located to minimize impacts to the church property on the west side of the road.
- Architectural design standards and landscaping requirements can be implemented by the Village of Rantoul to minimize the visual impacts of the off-base aviation uses, especially the adjacent residential area to the west.
- The Village of Rantoul may need to enact zoning to regulate development within the airfield safety zones.

4.2.2.2 Minor Aircraft Maintenance Operations Alternative. The overall impacts related to land use and aesthetics under this alternative would be lower than those under the Proposed Action. Because this alternative does not include the acquisition of 345 acres of off-base property for aviation support/maintenance activities, the farm complex with three inhabited buildings would not have to be acquired.

As for the Proposed Action, the SCS evaluated impacts to prime farmland that would result from this alternative (Appendix E). The proposal would impact

231 acres of agricultural land, which would be acquired to support the runway extension. A score of 161.3 was given. Applying the criteria contained in the LESA results in a determination that the impacted lands have "a low rating for protection." Based on this score, it appears that utilization of this site would be consistent with the intent of the FFPA that federal agencies minimize adverse impacts to agriculture from their projects and programs.

In developing the Airport Layout Plan, which is an integral part of the alternative, the impacts on farmland were considered. The areas proposed for conversion were kept to the minimum necessary to support the project.

Land Use. The on-base land use conflicts for this alternative would be similar to those under the Proposed Action (Figure 4.2-3). Potential conflicts regarding existing on-base IRP sites would be the same for this alternative as for the Proposed Action.

The off-base land uses would include extending the runway, resulting in the loss of 231 acres of privately owned agricultural land designated as prime farmland. The Illinois Department of Agriculture has indicated that this development would be in compliance with the Illinois Farmland Preservation Act.

Zoning. The Minor Maintenance Operations Alternative is generally consistent with the Village of Rantoul's zoning for Chanute AFB, except for the following potential conflicts:

- The proposed Institutional (educational) land use zone in the central portion of the base is in the Aviation Support District. The proposed aviation support land use zone adjacent to the southern hangar is in the Residential District and the proposed aviation support area west of Heritage Lake Park is in the Recreation District.
- The configuration of the residential areas may be in conflict with the subdivision requirements of the zoning ordinance.

Aesthetics. The on-base aesthetics effects for the Minor Maintenance Operations Alternative are the same as for the Proposed Action. The off-base aesthetics effects would be the same as for the Proposed Action, except that there would be no conflicts associated with the off-base aviation maintenance facility, because it is not included in this alternative.

Cumulative Impacts. The reuse of Chanute AFB along with the disposal of Chapman Court for residential development would not cause cumulative impacts to land use and aesthetics.

Mitigation Measures. On-base mitigation measures for the Minor Maintenance Operations Alternative would be the same as those for the Proposed Action. Because the development of the off-base areas of prime farmland is still tentative and no detailed plans for development are available, mitigation can be

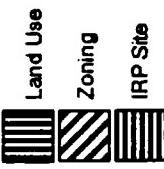
Land Use Conflicts

Minor Aircraft
Maintenance
Operations
Alternative

Chanute AFB
Rantoul, Illinois

EXPLANATION

Land Use Conflicts



Land Uses

- | | |
|---|--|
| ① | Airfield |
| ② | Aviation Support |
| ③ | Institutional (Educational/
Training) |
| ④ | Industrial |
| ⑤ | Institutional (Medical) |
| ⑥ | Commercial |
| ⑦ | Public/Recreation |
| ⑧ | Residential |



0 600 1200 2400 Feet

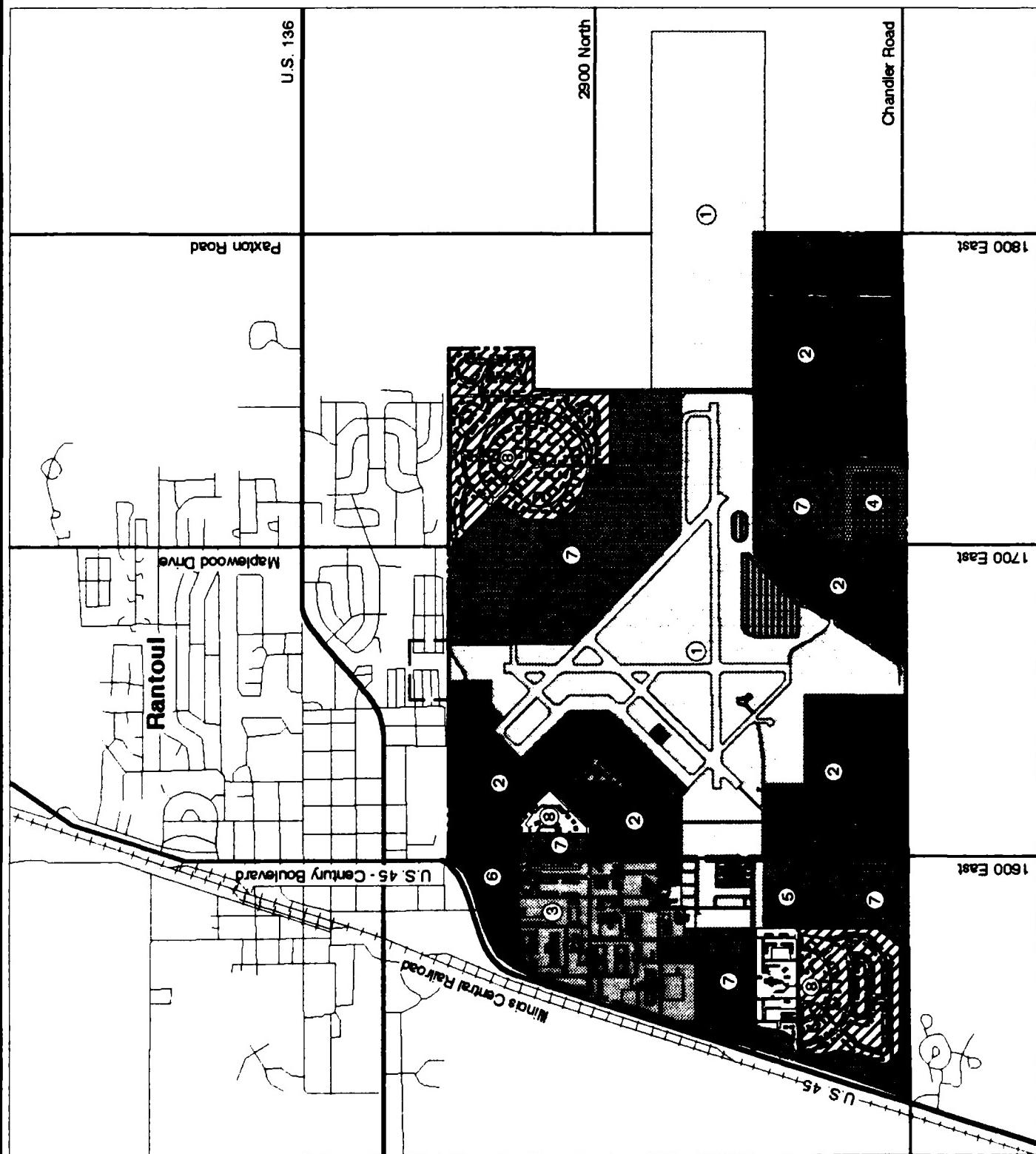


Figure 4.2-3

considered before development begins. Such mitigation can include analysis of siting requirements or redesign of infrastructure to minimize impacts. Additional off-base mitigation measures for the Minor Aircraft Maintenance Operations Alternative may include the need for the Village of Rantoul to enact zoning to regulate development within the off-base airfield safety zones and the FAA could obtain a waiver for the abandoned sewage treatment plant in the clear zone of Runway 9/27. The demolition of off-base residences and relocation of their inhabitants described under the Proposed Action would not be required for this alternative, because off-base land would not be acquired for aviation support.

4.2.2.3 Non-Aviation Alternative. The overall impacts related to land use and aesthetics would be minimal compared to the Proposed Action and the Minor Aircraft Maintenance Operations Alternative because this alternative does not include any aircraft operations or an airport.

Land Use. Because the Non-Aviation Alternative plan does not include airfield operations, on-base agricultural land uses surrounding the existing airfield could continue and be expanded. The remainder of the airfield would include a large industrial (warehouse) use area including the existing base hangars and the area to the north, which is not part of the other alternatives (Figure 4.2-4).

Remediation activities at existing on-base IRP sites may delay the disposal of properties (in the southeast quadrant of the base), restricting the timely reuse as follows:

- Institutional (Education/Training)
- Agricultural
- Open/Recreational.

A more detailed discussion of IRP sites is provided in Section 4.3.3.

There are no off-base land use impacts associated with this plan.

Zoning. The planned Non-Aviation Alternative could present some zoning conflicts, as follows:

- The proposed public recreation areas and education/training areas are in the Aviation Support District.
- The proposed educational/training area is in the Residential District.
- The proposed industrial areas are in the Airfield, Aviation Support, and Institutional (education/training) Districts.
- The proposed agricultural areas are in the Airfield and Aviation Support Districts.

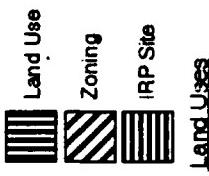
Aesthetics. The Non-Aviation Alternative is not expected to have any adverse effects on features of medium visual sensitivity, because reuse would be for the same type of uses, or reuses would be generally screened visually by existing trees.

Land Use Conflicts - Non-Aviation Alternative

Chanute AFB
Rantoul, Illinois

EXPLANATION

Land Use Conflicts

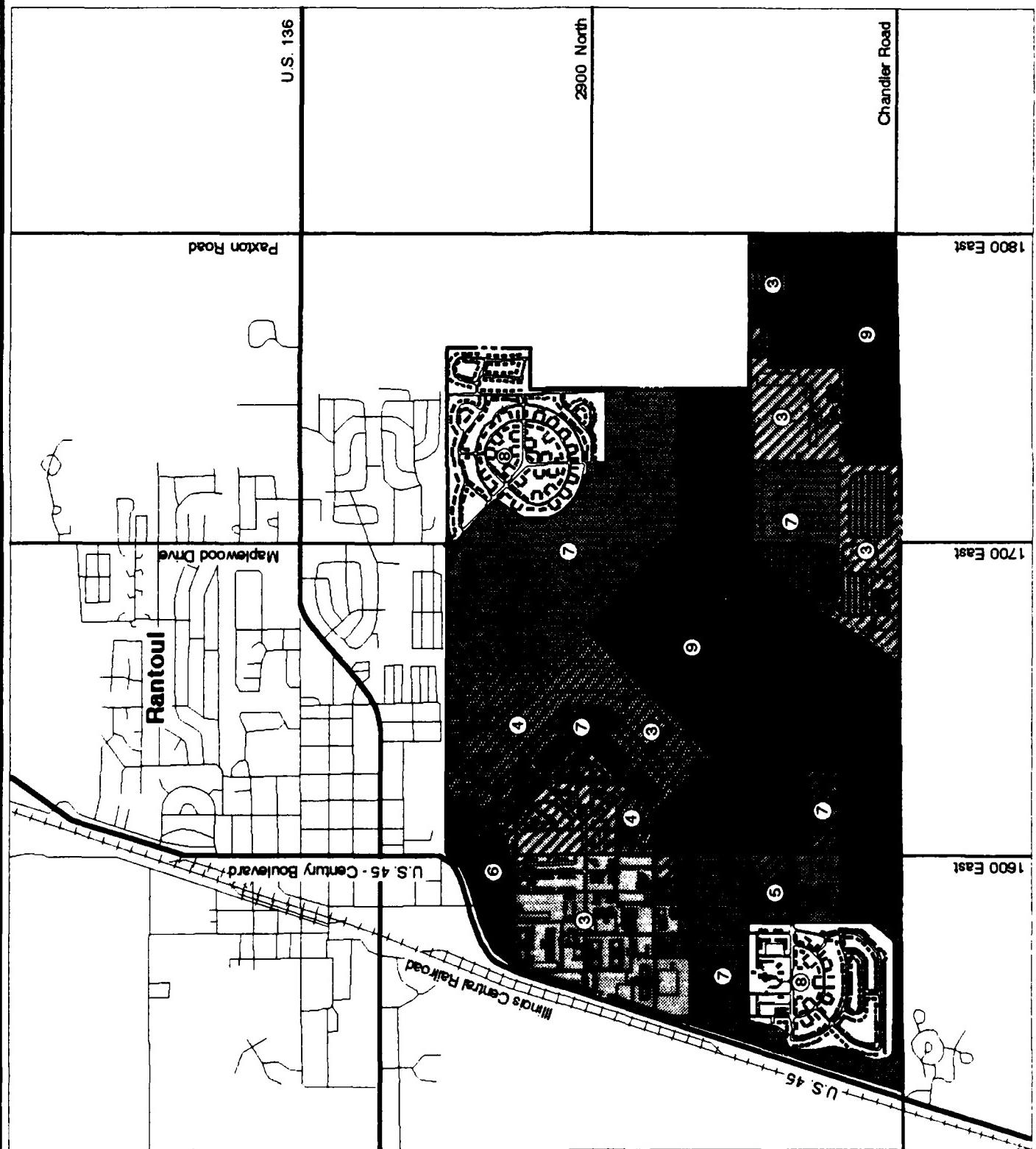


Landwirt

- | | |
|-----|--|
| 1 | Not Applicable |
| 2 | Not Applicable |
| 3 | Institutional (Educational/
Training) |
| 4 | Industrial |
| 5 | Institutional (Medical) |
| 6 | Commercial |
| 7 | Public/Recreation |
| 8 | Residential |
| 9 | Agriculture |
| ... | Base Boundary |



Figure 4.2-4



Portions of the on-base industrial development would be visible from the residences (mobile homes), J.W. Eater Jr. High School, and Walbash Park to the north. The only other visual impact would be the reuse of additional areas of the base airfield for agriculture crop production. Overall, the Non-Aviation Alternative is not expected to significantly affect the visual and aesthetic quality of the base. Some portions of the base, especially the southeast quadrant, would be managed less intensively and allowed to return to a more natural condition.

Cumulative Impacts. The reuse of Chanute AFB along with the disposal of Chapman Court for residential development would not create cumulative impacts to land use and aesthetics.

Mitigation Measures. No mitigation measures would be required.

4.2.2.4 No-Action Alternative. Because the Federal government would retain ownership of the property under the No-Action Alternative, it would remain outside the jurisdiction of Rantoul's zoning ordinance. As long as the base remained unused, there would be no conflict with local zoning ordinances. Keeping the base closed, however, would be inconsistent with state and local plans for reuse.

The No-Action Alternative would cause no physical changes in on-base and off-base land use. Functionally, there would be no use of base land, except the 300 acres of land in agricultural production. The disposal management team would continue to maintain the buildings and the grounds.

The No-Action Alternative would not affect the ultimate requirement to remediate hazardous waste sites on base, but it would reduce the urgency of cleanup. As long as the sites were stabilized and did not present a danger to off-base areas and natural resources, remediation could be delayed.

Aesthetics. The No-Action Alternative is not expected to significantly affect the visual and aesthetic quality of the base or the surrounding area. Some portions of the base currently being maintained by activities such as mowing will be managed less intensively. The reduced activity on the base will increase the remoteness of certain areas.

Cumulative Impacts. The No-Action Alternative would result in no cumulative impacts to land use.

Mitigation Measures. Because there would be no new land uses and the U.S. Government would retain ownership, there would be no land use impacts as a result of the No-Action Alternative. Therefore, no mitigation measures would be required.

4.2.3 Transportation

The effects of the Proposed Action, Minor Aircraft Maintenance Operations Alternative, Non-Aviation Alternative, and No-Action Alternative on each component of the transportation system are presented in this subsection. Mitigation measures are suggested for those components likely to experience substantial and adverse changes under any or all of these alternatives.

Direct effects of the various alternatives on road traffic were assessed by estimating the number of trips generated from on-site employment, student and medical patient populations, and residential use projected for each reuse alternative. Indirect trips were calculated from changes in Rantoul-area population associated with each alternative. Taking into account total (direct plus indirect) trips and road-segment capacity, LOS changes on key road segments were computed for each alternative (see Table 3.2-2 for definitions). Changes in work and, therefore, travel patterns were derived by assigning workers to, or removing workers from, the most direct commuting routes. Because none of the alternatives assumes direct use of local railroads or passenger air travel service, effects on these transportation modes were evaluated based on changes in Rantoul-area population proportionate to preclosure levels.

The effects of the Proposed Action and alternatives on the National Airspace System and the effects on aviation activities and airspace management resulting from disposal and reuse were considered. Reuse activities were evaluated against the baseline conditions of airspace utilization, flight operations, and standards. A 1-percent annual increase in aircraft operations was assumed for civil airports in the ROI.

The potential airspace and air traffic effects are evaluated based on the extent to which the Proposed Action or alternative (1) severely restricts, limits, or otherwise delays other air traffic in the region, (2) interferes with aircraft operators' capabilities to comply with Federal air regulations and rules of flight, (3) constrains air commerce opportunities, or (4) increases the potential for an aircraft accident.

4.2.3.1 Proposed Action

Roadways. The reuse of Chanute AFB under the Proposed Action would lead to increased use of local roads and highways, especially in the vicinity of Rantoul. Traffic volumes on community roadways would continue to increase through the year 2014, when the reuse plan would be fully implemented. Only three roads provide direct access onto Chanute AFB: U.S. 45, Maplewood Drive, and Chandler Road. When the proposed aircraft maintenance facility is constructed on the east side of Chanute AFB, Township Road 1800 East would also become an important carrier of traffic. The IDOT has proposed a new four-lane, divided,

north-south entrance road running one-half mile south from U.S. 136 (Township Road 1800 East alignment). Less than 1 mile of U.S. 136 would be widened to five lanes with traffic signals at its intersection with the new entrance road (Township Road 1800 East). In addition, local road improvements would be made to Eagle Drive and along the north base boundary roadway. The analysis prepared for this study assumes that the proposed road work would be completed as part of the Proposed Action.

Future users of the Main Gate would drive on U.S. 45 North and users of Borman Road (the old West Gate) and Heritage Drive would access or egress onto U.S. 45 South. Therefore, the five key community roadways studied in this analysis are Township Road 1800 East, Chandler Road, Maplewood Drive, U.S. 45 North, and U.S. 45 South. It is assumed that all traffic using Chandler Road would also be using U.S. 45 South (see Figure 3.2-8).

On-Site Direct Effects on Key Community Roads. During construction and renovation of on-site facilities (primarily 1991 through 1997), roadway impacts would be felt throughout the Rantoul-Chanute AFB area. Without upgrading, during the peak year of construction (1992), several key road segments would experience peak-hour LOS degradation as a result of reuse-generated construction traffic. These roads would include Township Road 1800 East, Maplewood Drive, Chandler Road, and U.S. 136. Township Road 1800 East, Maplewood Drive, and Chandler Road would bear most of the traffic going onto the aircraft maintenance construction site, and U.S. 136 would provide access to roads on the east side of the base. As many as 2,200 construction workers (in the 1992-1993 peak years) could be expected to use these roads.

The LOS on Maplewood Drive and Chandler Road will be A upon base closure. Traffic during the construction period would change the LOS on both roads to B. Township Road 1800 East would have an LOS of C until it is improved as proposed with four lanes, at which time the LOS would be A. The most obvious effects on U.S. 136 would be from heavy truck traffic, further congesting that road in central Rantoul. Other construction work on base (remodeling and some demolition work that would last several years) would be relatively light, with less than 200 construction workers projected. Further, because at least three access roads to the base from U.S. 45 could become available to these construction workers and truck traffic, impacts from other on-base construction work alone would not be sufficient to cause LOS degradation on community roadways.

The number of trips generated by each type of proposed land reuse was estimated for the operations period based upon Proposed Action projections for numbers of employees, students, and hospital patients. Figure 4.2-5 shows the distribution of the AADTs generated by the Proposed Action for the year 2014 on each key community road. The maximum number of trips generated by direct impact land uses is projected to be about 28,000 in that year.

With the introduction of the aircraft maintenance land use on approximately 345 acres on the east side of the base, Township Road 1800 East would become the most important carrier of employee and visitor traffic to and from that facility, carrying an AADT of about 10,000. The closure AADT on Township Road 1800 East would be only about 300. Maplewood Drive also would experience an increase from its closure AADT of about 2,400 to about 7,200. Direct impacts would generate about 4,400 daily trips on that road by the year 2014, compared to the approximately 130 AADT at closure.

On-Site Indirect Effects on Key Community Roads. In addition to the direct effects, on-site indirect effects would also generate trips on key community roads. Figure 4.2-5 shows that these trips would increase to about 28,600 by the year 2014, and illustrates their distribution onto adjoining key community roadways. U.S. 45 North would receive the greatest share of the indirect trips, ranging up to about 14,000 by the year 2014. The approximate numbers of AADTs generated by indirect effects on the other key roads are: Chandler Road, 1,400; Maplewood Drive, 7,200; and U.S. 45 South, 5,700. Indirect effects would generate no traffic on Township Road 1800 East.

Summary of On-Site Effects on Key Community Roads. Together, both direct and indirect trips would total about 56,600 by the year 2014. This represents an increase of 226 percent over the 25,000 trips generated by the base in the 1987-1988 period, and is substantially higher than the estimated closure baseline of about 180 trips per day. The distribution to the five key community roads is shown on Figure 4.2-5.

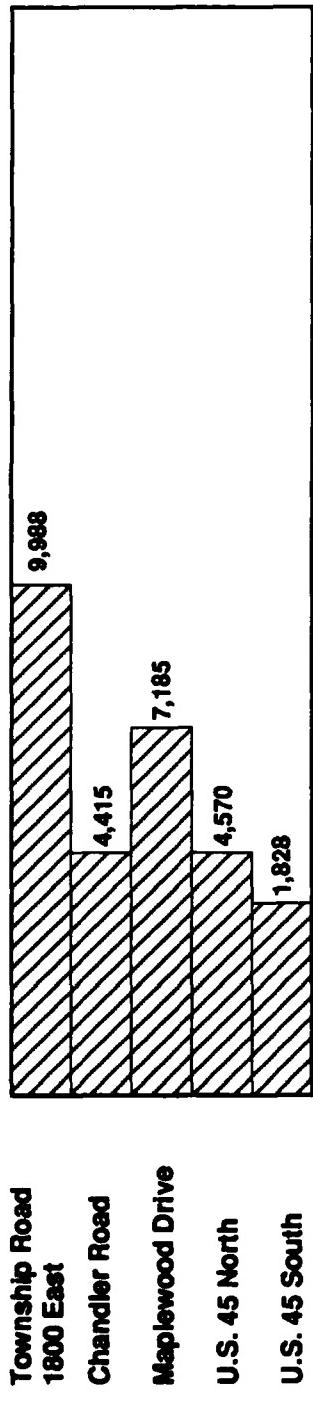
Figure 4.2-6 shows peak-hour traffic and LOS for preclosure, closure, and the years 1994, 1999, 2004, and 2014 for each of the five key roads, including the non-project-generated traffic. The activities associated with the Proposed Action would create few problems on either U.S. 45 North or U.S. 45 South; however, without changing their present capacity, Chandler Road and Maplewood Drive would have only marginally acceptable peak-hour traffic conditions (LOS D) by the year 1999. If Township Road 1800 East were improved to a four-lane, divided roadway as part of the Proposed Action, the resulting LOS would be A. Similarly, if U.S. 136 were improved with a widened section and traffic signals at Township Road 1800 East, as proposed by the IDOT, traffic flow on that roadway would also be improved.

Off-Site Effects. Changes in the magnitude of off-site traffic resulting from direct and indirect effects of the Proposed Action would be proportional to projected changes in population in the Village of Rantoul and the rest of the ROI. Under the Proposed Action, a gain of about 11 percent in Rantoul's population is projected during the 20-year period between 1994 and 2014. Traffic volumes in the Village would increase by the same amount during that period. Consequently, the Proposed Action should have no noticeable negative effects on off-site Rantoul and ROI traffic conditions.

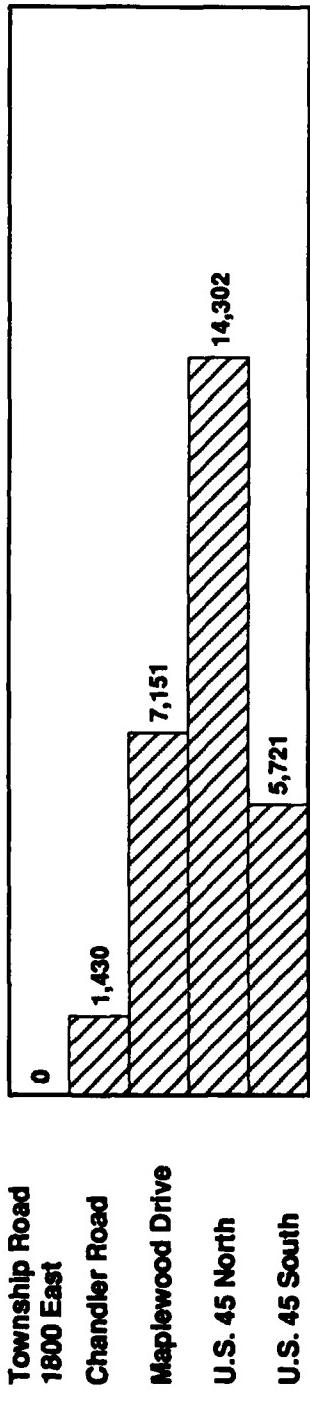
**Traffic Distribution
on Key Community
Roads (2014) -
Proposed Action**

**Chanute AFB
Rantoul, Illinois**

Projection of Direct AADT



Projection of Indirect AADT



Projection of Total AADT

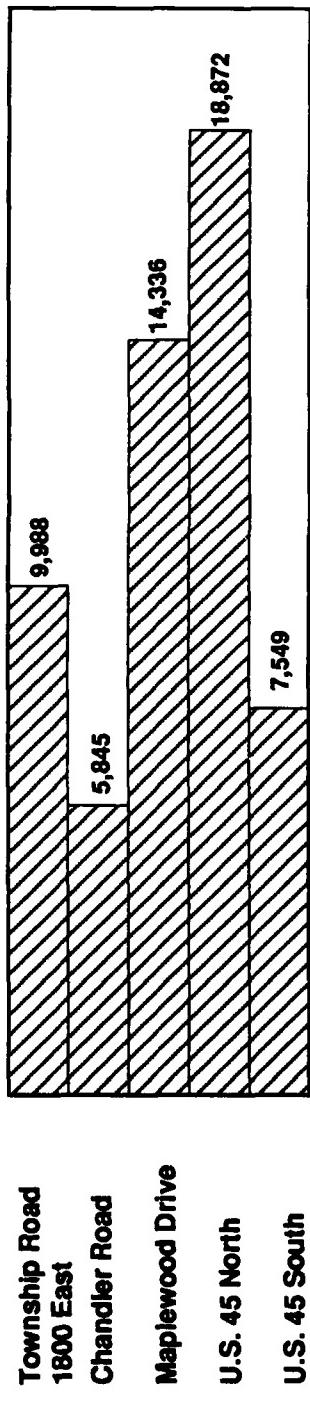


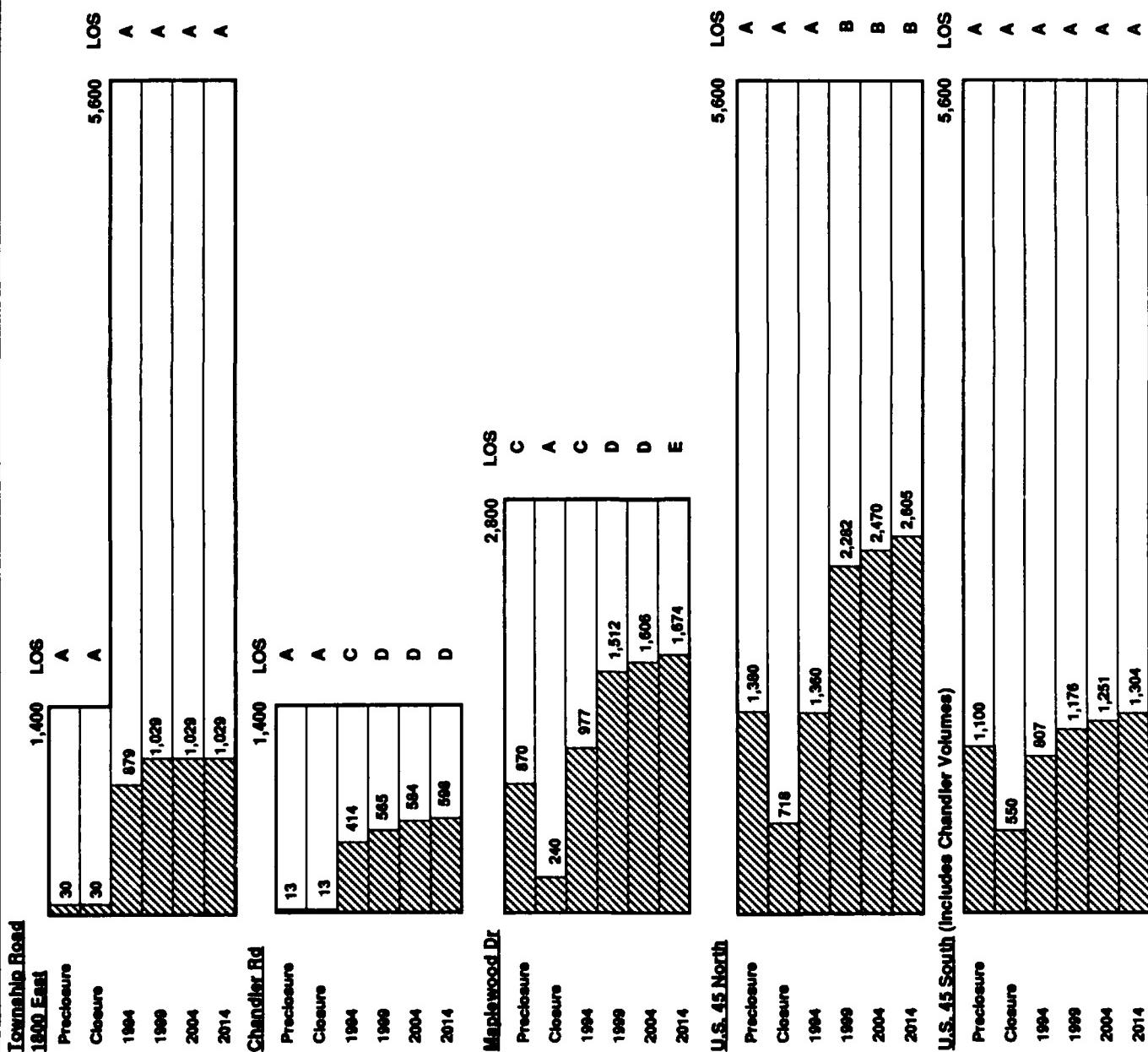
Figure 4.2-5

Peak-Hour Traffic Volumes on Key Community Roads-Proposed Action

Chanute AFB Rantoul, Illinois

EXPLANATION

- Peak-Hour Traffic Volume (passenger cars per hour)
- Peak-Hour Traffic Capacity (passenger cars per hour)
- LOS Level of Service



Note: Township Road 1800 East will be widened to four lanes by 1994 as part of the Proposed Action.

Figure 4.2-6

Effects on Key On-Site Roads. Figure 4.2-7 presents data on peak-hour traffic and LOS that would result from the Proposed Action for the key on-base roads. All roads on base have a peak-hour capacity of 2,800. Eagle Drive would be widened to four lanes as part of the Proposed Action. However, because of side friction from driveways and intersections, its peak-hour capacity would not be improved significantly above 2,800. Based upon projections for numbers of employees, students, and hospital beds, distribution would be similar to that found on base in the 1987 Military Traffic Management Command study (Transportation Engineering Agency, 1987) for the five on-base roads. It is assumed that Heritage Drive, which is proposed as a future access into the project area, would carry 10 percent of the total. None of the on-base roads would have an LOS lower than D, an acceptable level.

Airspace/Air Traffic. Aviation activities under the Proposed Action include aircraft maintenance/training operations, small air cargo operations, and light general aviation operations. These operations could include a variety of aircraft types from small, single-engine to large, cargo/passenger jet aircraft such as B-747s and DC-10s. The projected numbers of flight operations and fleet mix associated with this airfield usage are shown in Table 4.2-1. FAA recommendations (Federal Aviation Administration, 1983) were utilized to determine the Annual Service Volume (ASV), as a reasonable estimate of an airport's operational capacity based on runway configuration, fleet mix, weather conditions, etc., that would be encountered over a year's time. Projected operations are then compared to the ASV to determine if the airport can meet forecasted demands. The ASV for the Proposed Action ranges from approximately 200,000 operations from 1994 through 2014. Because forecasted operations represent only about 11 percent of the ASV by 2014, no capacity constraints would be expected.

Table 4.2-1. Projected Aviation Forecast - Proposed Action

	Average Annual Operations			
	1994	1999	2004	2014
Aviation Category				
General Aviation	10,000	15,045	17,100	18,800
Aircraft Maintenance	1,600	2,600	2,600	2,600
Air Cargo	730	730	730	1,460
Total Operations	12,330	18,375	20,430	22,860
Fleet Mix (Percent of Total Operations)				
Piston Engine	69	69	69	68
Turboprop	6	7	8	8
Narrow Body Jet	24	23	22	23
Wide Body Jet	1	1	1	1

**Peak-Hour Traffic
Volumes on Key
On-Base Roads-
Proposed Action
and Minor Aircraft
Maintenance
Operations
Alternative**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- Peak-Hour Traffic Volume (passenger cars per hour)
- Peak-Hour Traffic Capacity (passenger cars per hour)
- LOS Level of Service

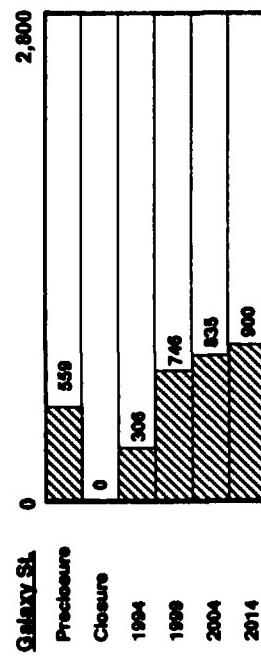
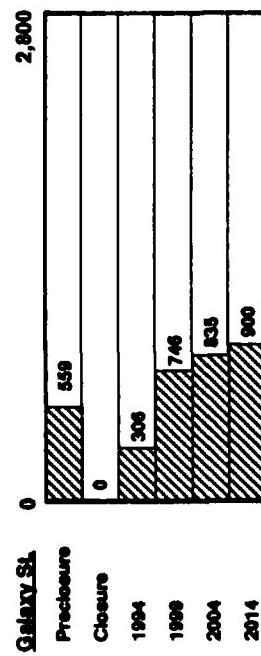
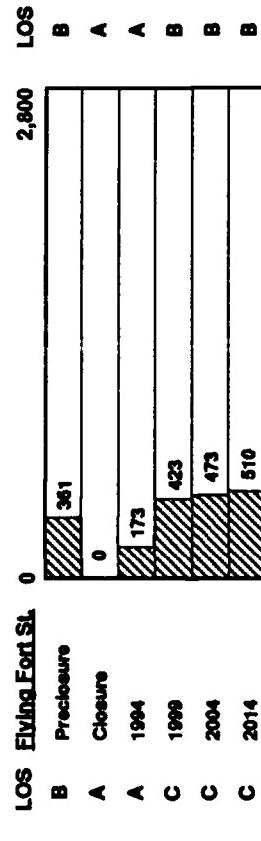
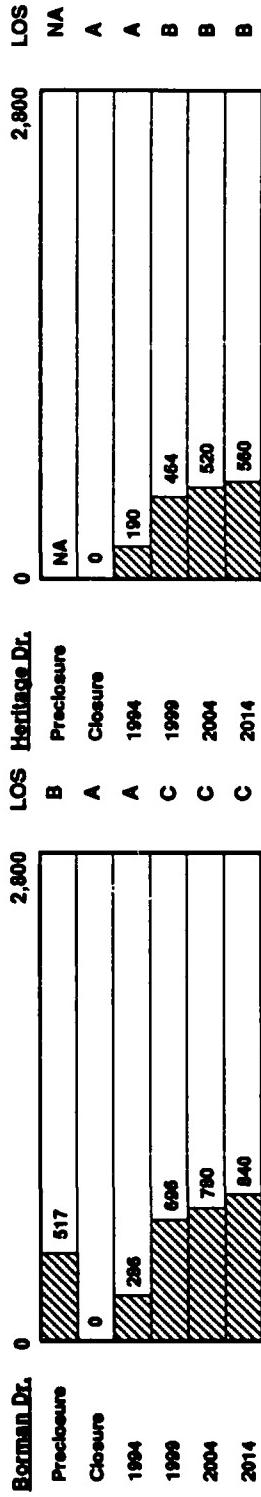
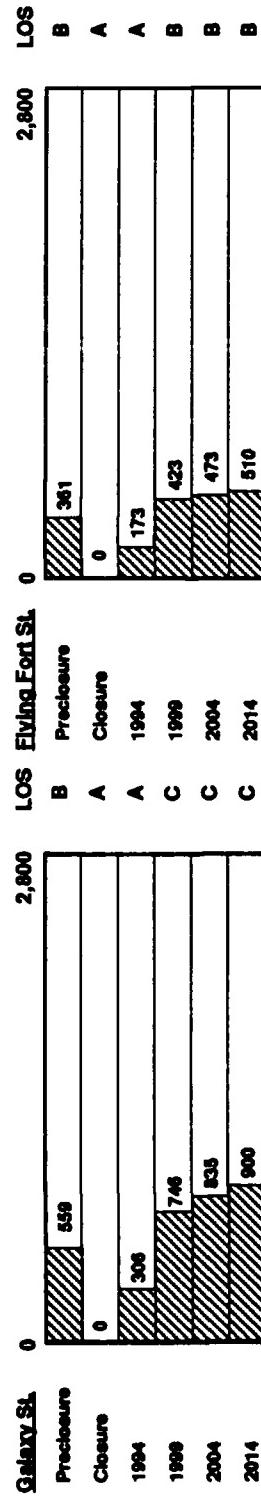
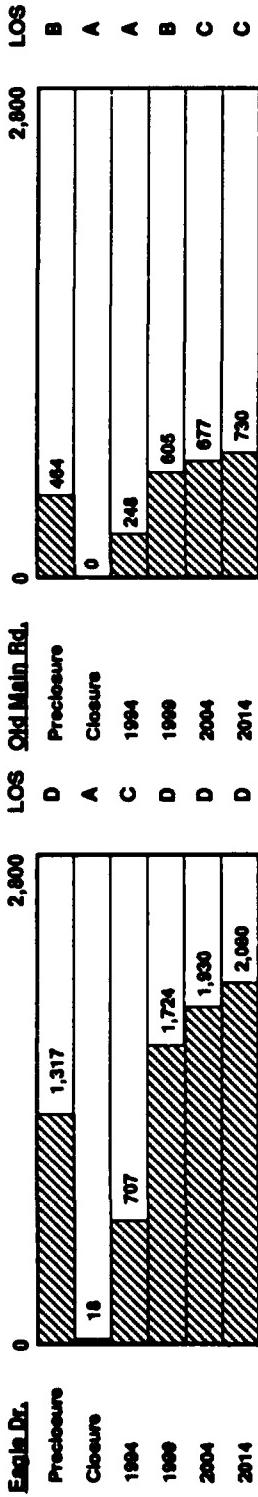


Figure 4.2-7

Airspace requirements would also depend on the type and level of aircraft operations. The IDOT and FAA have indicated that no airspace changes would be required to the Champaign approach control area or ARSA to accommodate the projected level of operations at Chanute AFB. If a control tower is commissioned, there would be a basic requirement for an airport traffic area, which is the airspace within a horizontal radius of 5 statute miles from the airfield extending from the surface to 3,000 feet above ground level (AGL). This is the operative airspace within which the tower controls local traffic patterns during airfield takeoffs and landings. The development of instrument approach procedures would also require the design and charting of a control zone and transition area to protect airspace encompassing these approaches. The control zone is generally a 5-statute-mile horizontal radius from the surface to 14,500 feet MSL, with lateral extensions as necessary to include approach and departure flight paths.

Roberts VORTAC, the ground facility providing course and distance information, is 20 statute miles north of Chanute AFB. The presence of this facility and installation of an ILS on the airfield would provide a precision and non-precision approach capability, respectively, to the east-west runway. Any approach procedures developed for Chanute AFB would have to meet the FAR Part 77 design criteria with regard to obstacle clearance zones. A cursory feasibility study conducted by the FAA indicated that an ILS approach is feasible for both ends of the east-west runway and a VOR approach is feasible for the west end (Runway 27) (Chicago Airports District Office, 1990a, b). As the controlling agency for IFR air traffic within the ROI, the Champaign TRACON would coordinate and separate, on a case-by-case basis, any potential conflicts between aircraft flying VOR instrument approaches into Chanute AFB and those IFR aircraft operating simultaneously at the other civil airports and along V-429. There would be no conflict between VFR touch-and-go traffic patterns at Chanute AFB and other airports because these patterns are normally contained within a 2-mile radius of the runways.

Based on the information presently available and preliminary findings of the FAA and IDOT, it does not appear that aircraft operations at Chanute AFB would result in any adverse impacts on air traffic and airspace use within the ROI.

Air Transportation. The effects of the Proposed Action on the Willard Airport would be the result of the action's contribution to the overall population gain in the ROI. The Willard Airport passengers-per-capita in 1988 (without Chanute's contribution) is calculated to be 0.913 (1988 airport ROI population divided by number of non-military-related passengers). By 2014, the population in the ROI is projected to generate about 172,000 passengers at Willard Airport, assuming the same passengers per-capita.

Light Emissions. The various runway lights and navigational aids required for airfield operations (see Section 2.2.1) should not cause any adverse effects.

Most are either directed upward to be visible to pilots or downward to light the runway. These lights should have no impacts on nearby business, residences, or the environment. The only potential impacts identified would be possible annoying effects created by the REIL system flashers in an occupied building or a roadway system in the proximity of the flashers. However, there are no structures or roadways in the airport area that should be affected by REIL operations.

Outer Marker. Signals from the compass locator outer marker for the ILS runway would not interfere with signals from any existing television stations.

Railroad Transportation. Effects on railroad service in the ROI from this alternative and natural population growth would be similar to those on air traffic: an increase of about 9.3 percent over the 20 years between 1994 and 2014.

Mitigation Measures. Two types of mitigation measures are available to reduce the effects of road traffic associated with the Proposed Action. First, transportation management procedures such as ride-sharing or van-pools could be employed to reduce the volume of vehicles on the road, and staggered work hours would reduce peak traffic. Second, LOS degradation could be reduced or avoided by appropriate widening of Chandler Road and improving intersections on Maplewood Drive. Chandler Road would have to be widened to two full lanes to raise its peak-hour capacity to at least 2,800 and its LOS to C. Intersections along Maplewood Drive would have to be improved and signals installed to increase the road's capacity to at least 4,500 and its LOS to C. No mitigations would be required for U.S. 45 North and U.S. 45 South.

Shielding of the REIL could prevent adverse impact on any affected areas that may be identified. The FAA/IDOT will prepare the necessary environmental documentation required for the location of the outer marker at such time that the action becomes ripe for decision-making. At that time, they will also determine any appropriate mitigation needed. No mitigation measures would be required for any of the other transportation components.

4.2.3.2 Minor Aircraft Maintenance Operations Alternative

Roadways.

On-Site Direct Effects on Key Community Roads. During construction and renovation of facilities, some effects of on-site activities would occur throughout the Rantoul-Chanute AFB area. During the peak year of construction and renovation of the on-site facilities, U.S. 45 North, U.S. 45 South, Maplewood Drive, Chandler Road, and, to some extent, U.S. 136 would experience increased use resulting from reuse-generated construction traffic. About 400 construction workers (in the 1992-1993 peak years) could be expected to use U.S. 45 North, U.S. 45 South, Maplewood Drive, and Chandler Road. The LOS on each of these

three roads is projected to be A at closure. Although volumes would increase, construction period traffic would not affect these roads substantially enough to change LOS ratings. The most obvious effects on U.S. 136 would be from some additional heavy truck traffic, which would cause further congestion on that road in central Rantoul.

The number of trips generated by each type of proposed land reuse was estimated for the operations period based upon projections for numbers of employees, students, and hospital patients. Figure 4.2-8 shows the AADT generated by the Minor Aircraft Maintenance Operations Alternative for the year 2014, for each of the five key roads that would be affected. The maximum number of trips generated by direct land uses is projected to be about 12,900 in that year. U.S. 45 North would continue to be the major traffic carrier for on-site activities, with about 6,460 AADT. Maplewood Drive would experience approximately 3,230 AADT from this alternative. It is assumed that Township Road 1800 East will not be affected by this alternative because no access to that road from the project site would be provided.

On-Site Indirect Effects on Key Community Roads. On-site indirect effects would generate about 24,500 additional trips. Figure 4.2-8 shows indirect trip distribution onto key community roadways. U.S. 45 North would receive the greatest share of the indirect trips, ranging up to about 12,300 AADT by the year 2014. Maplewood Drive would receive about 6,100 AADT from the activities of this alternative; U.S. 45 South, about 4,900; and Chandler Road about 1,200.

Summary of On-Site Effects on Key Community Roads. Together, both direct and indirect trips would total about 37,400 by the year 2014. This represents a very large increase over the 180 trips generated by the disposal management team upon closure in 1993. The distribution to the five key community roads is shown on Figure 4.2-8. U.S. 45 North would carry about 18,700 trips, or 50 percent of the total.

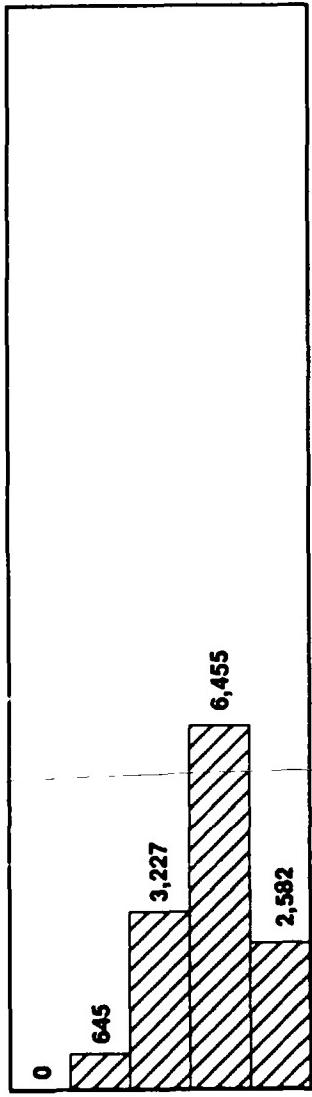
Figure 4.2-9 shows peak-hour traffic and LOS for preclosure, closure, and the years 1994, 1999, 2004, and 2014 for each of the five key roads, including the non-project-generated traffic. The effects of this alternative would create no LOS degradation on U.S. 45 South and only slight degradation on Chandler Road and U.S. 45 North. However, without an increase in capacity, peak-hour traffic loads on Maplewood Drive would result in a marginally acceptable LOS of D by the year 2014.

Off-Site Effects. Changes in the magnitude of off-site traffic resulting from direct and indirect effects of the Minor Aircraft Maintenance Operations Alternative would be proportional to projected changes in population in the Village of Rantoul and the rest of the ROI. A gain of about 7 percent in population is projected during the 20-year period between 1994 and 2014. Traffic volumes in the Village would increase by that same amount during that period.

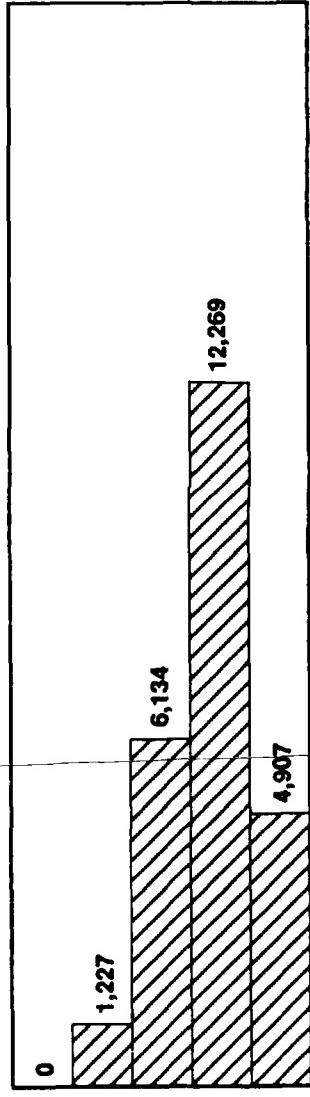
**Traffic Distribution
on Key Community
Roads (2014) -
Minor Aircraft
Maintenance
Operations
Alternative**

**Chanute AFB
Rantoul, Illinois**

Projection of Direct AADT



Projection of Indirect AADT



Projection of Total AADT

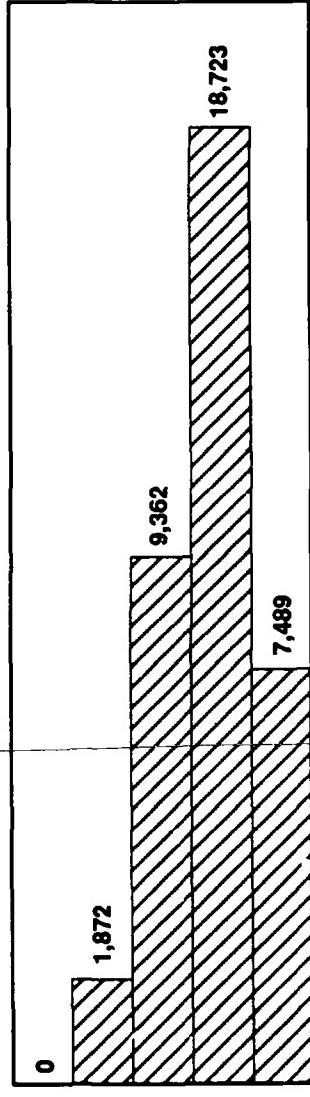


Figure 4.2-8

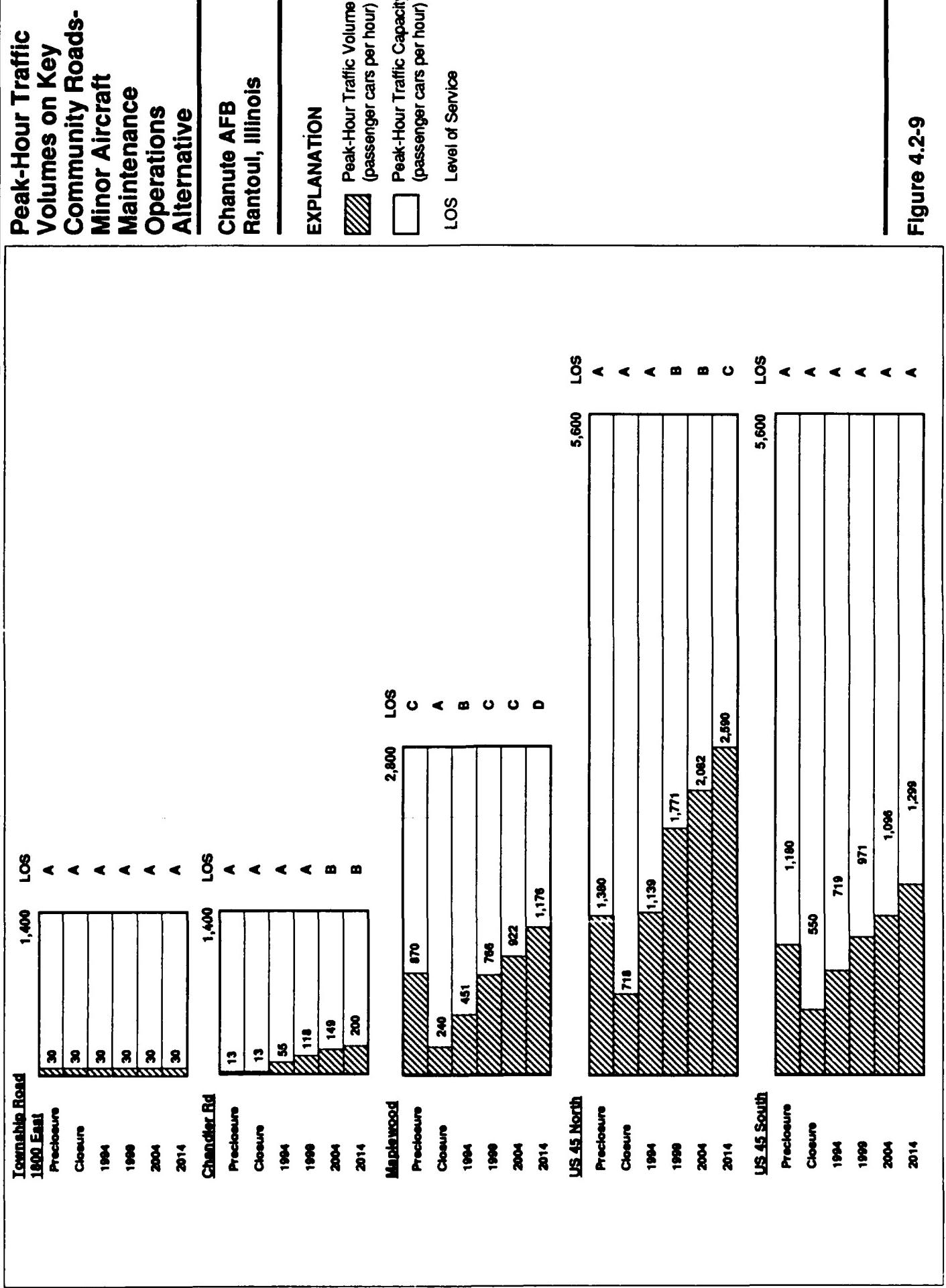


Figure 4.2-9

Consequently, this alternative should have no noticeable negative effects on off-site Rantoul and ROI traffic conditions.

Effects on Key On-Site Roads. Figure 4.2-7 presents data on peak-hour traffic and LOS that would result from the Minor Aircraft Maintenance Operations Alternative for the six key on-base roads. Although the Proposed Action is projected to generate more traffic than this alternative, the projected usage on the key on-base roads is expected to be similar. All roads on base have a peak-hour capacity of 2,800. Eagle Drive would be widened to four lanes as part of the Proposed Action. However, because of side friction from driveways and intersections, its peak-hour capacity would not be improved significantly above 2,800. Based upon projections for numbers of employees, students, and hospital beds, distribution would be similar to that found on base in the 1987 Military Traffic Management Command study (Transportation Engineering Agency, 1987) for the five on-base roads. It is assumed that Heritage Drive, which is proposed for a future access into the project area, would carry 10 percent of the total traffic. None of the on-base roads would have an LOS lower than D, an acceptable level.

Airspace/Air Traffic. This alternative includes minor maintenance, small air cargo, and light general aviation aircraft operations, which would result in less air traffic than the Proposed Action. These operations would primarily include light, single-engine aircraft and large jet aircraft such as B-747s and DC-10s. The projected numbers of flight operations and fleet mix associated with this alternative are shown in Table 4.2-2. Based on these projections, the fleet mix, and runway configuration, the ASV for each of the projected years is approximately 200,000 operations. This alternative, therefore, represents about 10 percent of the available capacity, posing no constraints on airfield use.

Table 4.2-2. Projected Aviation Forecast - Minor Aircraft Maintenance Operations Alternative

Aviation Category	Average Annual Operations			
	1994	1999	2004	2014
General Aviation	10,000	15,045	17,100	18,800
Aircraft Maintenance	300	500	600	700
Air Cargo	730	730	730	1,460
Total Operations	11,030	16,275	18,430	20,960
Fleet Mix (Percent of Total Operations)				
Piston Engine	77	78	76	73
Turboprop	7	7	8	9
Narrow Body Jet	15	14	15	17
Wide Body Jet	1	1	1	1

Airspace requirements would also be dependent on the type of air traffic control and instrument approach services provided, as discussed under the Proposed Action.

Based on the information presently available and preliminary findings of the FAA and the IDOT, it does not appear that aircraft operations at Chanute AFB under this alternative would result in any impacts on air traffic and airspace use within the ROI.

Air Transportation. The effects of the Minor Aircraft Maintenance Operations Alternative on the Willard Airport would be the result of the alternative's contribution to the overall population gain in the ROI. The Willard Airport passengers-per-capita in 1988 (without Chanute's contribution) was 0.913. By 2014, the population in the ROI is projected to generate about 164,500 passengers, assuming the same passengers-per-capita.

Light Emissions. The required lighting systems for this alternative will be similar to those for the Proposed Action (see Section 2.3.1.1), and potential effects would, therefore, be similar.

This alternative includes an MALSR light system. The sequenced flashers of this system could have a damaging effect to the retina of the eye, particularly if viewed with any optical magnifying agent. Any damage that could occur would depend upon many variables, including distance, power of the magnification, and the physical condition of the eyes involved. It is, therefore, recommended that under no circumstances should the sequenced flashers be viewed through a magnifying agent. As for the REIL system, annoying effects could be created by the flashers in an occupied building or a roadway system in the proximity of the flashers.

Outer Marker. Signals from the compass locator outer marker for the ILS runway would not interfere with signals from any existing television stations.

Railroad Transportation. Effects on railroad service in the ROI expected from this alternative would be similar to those on air traffic: an increase of about 8.7 percent over the 20 years between 1994 and 2014.

Mitigation Measures. Some reductions in traffic could be achieved using ride-sharing and other transportation management techniques. LOS reductions could be avoided through expansion of road capacities, particularly through road widening and signalization. The only roadway improvements required would be on Maplewood Drive, for which the peak-hour LOS would drop to D by the year 2014. This could be mitigated by providing signalization and other improvements at key intersections.

Any possible adverse effects on the surrounding ground level residences or highway traffic as a result of the installation or relocation of REIL systems can be mitigated through shielding. The FAA/IDOT will prepare the necessary environmental documentation required for the location of the outer marker at such time that the action becomes ripe for decision-making. At that time, they will also determine any appropriate mitigation needed. No mitigation measures would be required for any of the other transportation components.

4.2.3.3 Non-Aviation Alternative

Roadways.

On-Site Direct Effects on Key Community Roads. The effects of the Non-Aviation Alternative construction workers on key community roads would be negligible because during the peak-construction years (late 1990s) there are projected to be only about 35 construction workers.

The number of trips generated by each type of proposed reuse land use was estimated for the operations period based upon projections for number of employees, students, and hospital patients. Figure 4.2-10 shows a summary of the AADT generated by the Non-Aviation Alternative for the year 2014, for each of the five key roads that would be affected. The maximum number of trips generated by direct effect land uses is projected to be about 9,100 in that year. U.S. 45 North would continue to be the major traffic carrier for on-site activities, with about 4,600 AADT. Maplewood Drive would experience about 2,300 AADT under this alternative, and U.S. 45 South about 1,800.

On-Site Indirect Effects on Key Community Roads. In addition to the direct effects, indirect effects would generate about 6,700 trips. Figure 4.2-10 shows the trip distribution onto key community roadways. U.S. 45 North would receive the greatest share of the indirect trips, ranging up to about 3,400 AADT by the year 2014. Maplewood Drive would receive about 1,700 AADT from the activities of this alternative; U.S. 45 South, about 1,300; and Chandler Road about 340.

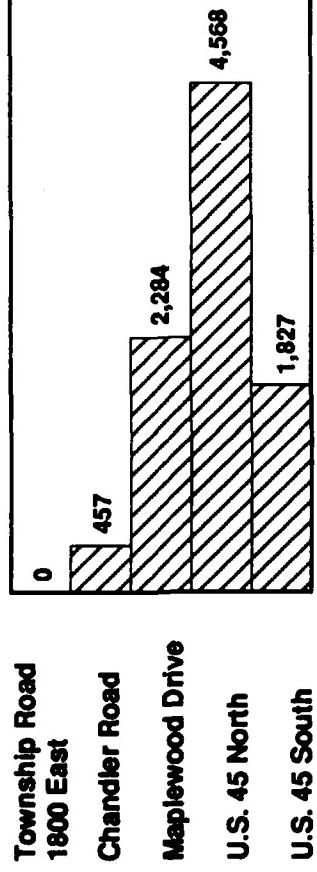
Summary of On-Site Impacts. Together, both direct and indirect trips would total about 15,900 by the year 2014. This number represents about 64 percent of the 25,000 trips generated by the base in the 1987-1988 period. The distribution to the five key community roads is shown on Figure 4.2-10. U.S. 45 South would carry about 7,900 trips, or about 50 percent of the total.

Figure 4.2-11 shows peak-hour traffic and LOS for preclosure, closure, and the years 1994, 1999, 2004, and 2014 for each of the five key roads, including the non-project-generated traffic. The effects of this alternative would create no LOS degradation on any of the key community roads except Maplewood Drive. Without a change in present capacity, the LOS on Maplewood Drive would

**Traffic Distribution
on Key Community
Roads (2014) -
Non-Aviation
Alternative**

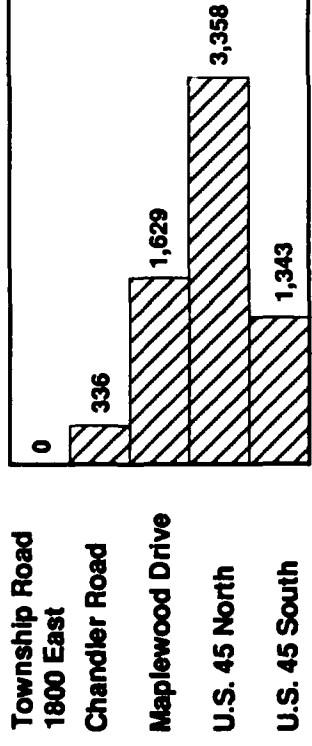
**Chanute AFB
Rantoul, Illinois**

Projection of Direct AADT



4-30

Projection of Indirect AADT



Projection of Total AADT



Figure 4.2-10

Peak-Hour Traffic Volumes on Key Community Roads-Non-Aviation Alternative

Chanute AFB Rantoul, Illinois

EXPLANATION

Peak-Hour Traffic Volume
 (passenger cars per hour)
 LOS Level of Service

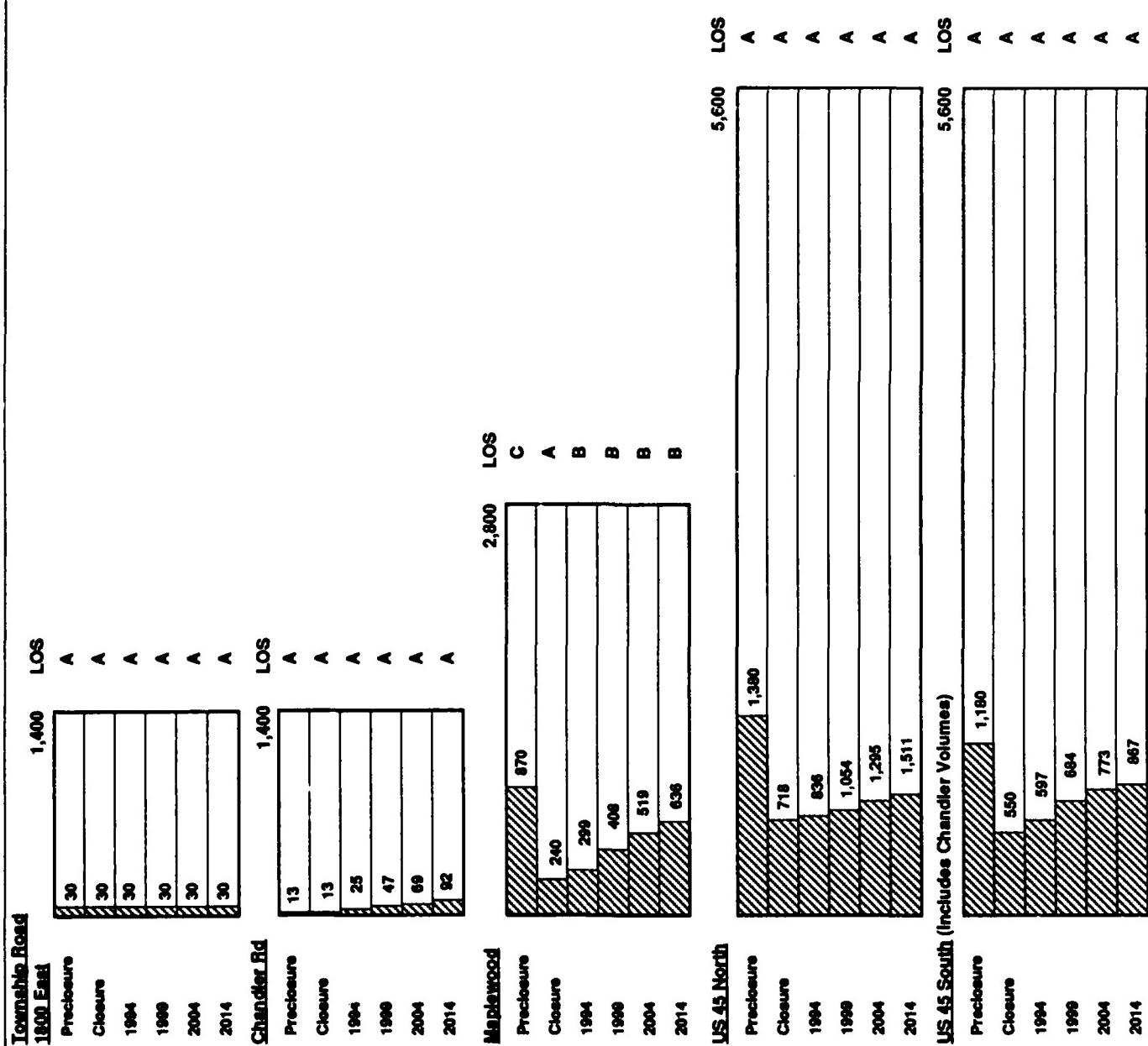


Figure 4.2-11

change from A at closure to B in the year 1994. This change is not considered to be a serious degradation of service.

Off-Site Effects. Changes in the magnitude of off-site traffic resulting from direct and indirect effects of the Non-Aviation Alternative would be proportional to projected changes in population in the Village of Rantoul. A gain of about 7 percent in Rantoul's population is projected during the 20-year period between 1994 and 2014. Traffic volumes in the city would increase by the same amount during that period. Consequently, this alternative should have no noticeable negative effects on off-site ROI traffic conditions.

Effects on Key On-Site Roads. Figure 4.2-12 presents data on peak-hour traffic and LOS that would result from the Non-Aviation Alternative for the six key on-base roads. All roads on base have a peak-hour capacity of 2,800. Based upon projections for numbers of employees, students, and hospital beds, distribution would be similar to that found on base in the 1987 Military Traffic Management Command study (Transportation Engineering Agency, 1987) for the five on-base roads. It is assumed that Heritage Drive would carry 10 percent of the total traffic. None of the on-base roads would have an LOS lower than B, which is an acceptable level.

Airspace/Air Traffic. The use of Chanute AFB for non-aviation purposes only would have no effect on air traffic and airspace in the ROI.

Air Transportation. The effects of the Non-Aviation Alternative on the Willard Airport would be the result of the alternative's contribution to the overall population gain in the ROI. The Willard Airport passengers-per-capita in 1988 (without Chanute's contribution) was 0.913. By 2014, the projected population in the ROI will be about 178,600, generating about 162,000 passengers, assuming the same passengers-per-capita.

Railroad Transportation. Effects on railroad service in the ROI expected from this alternative would be similar to those on air traffic: an increase of about 8.2 percent over the 20 years between 1994 and 2014.

Mitigation Measures. No mitigation measures would be required for any of the transportation components.

4.2.3.4 No-Action Alternative

Roadways

On-Site Direct Effects. As discussed in the closure baseline, only the 50-person disposal management team would be active at the base. It is assumed that all of these employees would use what is presently the main gate and its access, U.S. 45 North. The 50 employees and other vehicles would generate about 180 trips

Peak-Hour Traffic Volumes on Key On-Base Roads-Non-Aviation Alternative

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

	Peak-Hour Traffic Volume (passenger cars per hour)	Peak-Hour Traffic Capacity (passenger cars per hour)	LOS Level of Service
Precisione	1,317	464	B
Closure	18	0	A
1994	55	20	A
1999	158	56	A
2004	262	92	A
2014	372	131	A

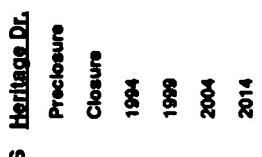
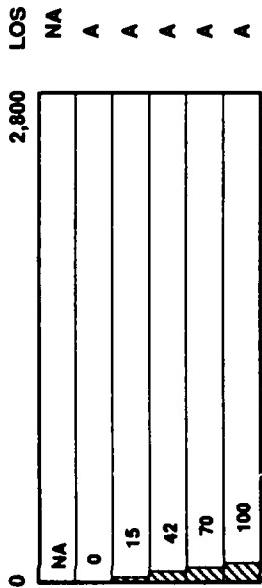
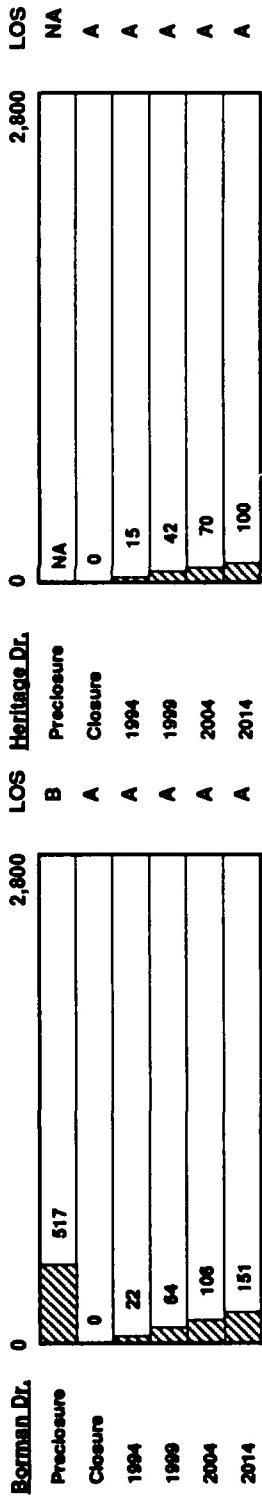
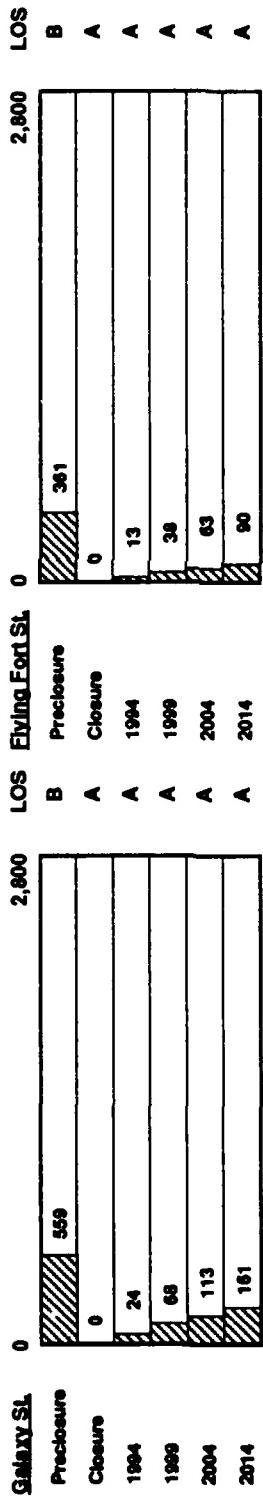
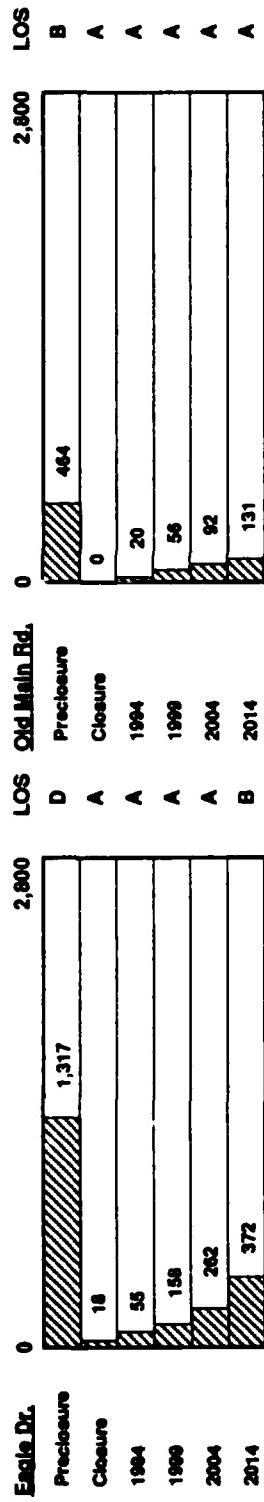


Figure 4.2-12

per day. The peak-hour traffic on U.S. 45 North would be about 720 vehicles, including non-base-generated traffic, and the LOS would be A. None of the other four key community roads would receive base-generated traffic, and all would maintain a peak-hour LOS of A.

Off-Site Effects. Without population growth there would be no negative off-site effects resulting from the No-Action Alternative.

Airspace/Air Traffic. Under the No-Action Alternative, the base would enter a caretaker status that would not include any airfield use. Because no airspace designations specific to aviation use (i.e., airfields) or instrument procedures are currently established at Chanute AFB, no cancellation actions would be required. Therefore, this alternative would have no effect on airspace use in the ROI.

Air Transportation. No effects on air transportation service or safety are expected from this alternative.

Railroad Transportation. No effects to railroad service or safety are expected from this alternative.

Mitigations Measures. No mitigation measures would be necessary for this alternative.

4.2.4 Utilities

Direct and indirect changes in future utility demand for each alternative were estimated based on historic, preclosure, per-capita average daily use on Chanute AFB and in the Village of Rantoul. Historic per-capita factors for Chanute AFB include the number of residents and workers on the base. These factors were applied to estimates of numbers of future residents and employees associated both with on-base reuses and the off-base aircraft maintenance area incorporated into the Proposed Action. The average daily use factors for both the base and Rantoul are shown in Table 4.2-3.

4.2-3. Daily Average Preclosure Per-Capita Utility Demand (1986-1988)

	Chanute AFB	Rantoul
Water (gallons per day)	162.2	64.3
Wastewater (gallons per day)	56.1*	87.5
Solid Waste (cubic yards per day)	1.8	3.5
Electricity (kwh per day)	13.7	12.8
Natural Gas (therms per day)	0.5	1.2
Coal (pounds per day)	14.1	N/A

*Assumes an inflow/infiltration rate of 55% (0.9 mgd), which would be unaffected by base closure/reuse.

Source: U.S. Air Force, 1990g; Village of Rantoul, 1990b.

The following assumptions were made in the analysis of potential effects on utilities:

- The general character of activities related to utilities in both Rantoul and in the reuse area does not change appreciably as the result of reuse actions. Consequently, preclosure per-capita utility demand was assumed to be reasonably representative of future demand during base reuse.
- Except for the No-Action Alternative, reuse activities commence prior to base closure. Therefore, utility demands for prior use and reuse overlap.
- Under the No-Action Alternative, a staff of approximately 50 people would provide the necessary maintenance functions. Utility demand would be proportional to the number of staff except for coal and natural gas; about 20 percent of present consumption of these fuels would be required to maintain minimum space heating in existing facilities.
- Natural gas would continue to be supplied from a commercial source (NIGC).
- A single entity would assume responsibility for operation of at least the larger (central) of the two on-base heating plants. Non-use or a change in fuel source for this coal-fired steam plant would result in a substantial increase in the demand for natural gas.

The Village of Rantoul's position on the transfer of and responsibility for Chanute AFB infrastructure is presented in a Position Statement included as Appendix J of this EIS.

4.2.4.1 Proposed Action.

Water Supply. The Proposed Action would require water for a broad range of uses that are generally similar to those currently being carried out on Chanute AFB. There are no plans for new facilities that would be expected to require unusually high volumes of processing water. Integration of the existing potable water supply systems in the Village of Rantoul, with a capacity of 3.2 MGD, and on Chanute AFB, with a capacity of 5.8 MGD, would result in a system with a delivery capacity of 9.0 MGD of treated water. The systems could be interconnected through existing lines, and are currently available for mutual support (e.g., fire fighting or other emergencies).

Figure 4.2-13 shows the estimated potable water demand for both Rantoul and the reuse area from 1991 to 2014 for the Proposed Action and for each of the three alternatives. The estimate includes preclosure requirements of the Air Force, but excludes small amounts of water required during construction activities. The contributions associated with direct workers (i.e., regular, full-time employees of the aircraft maintenance, educational, and medical facilities) and with indirect water users (students, patients, suppliers, golfers, pilots, etc.) are also shown.

With initiation of reuse activities prior to closure, demand would decline to a projected minimum of approximately 1.2 MGD in 1994. Associated construction activities would result in small increases in the volume of water consumed during the low-volume years. Because the on-base water plant is capable of

**Rantoul and
Chanute AFB
Treated Water
Production-
All Alternatives**

Average Daily Water Production: 1991-2014

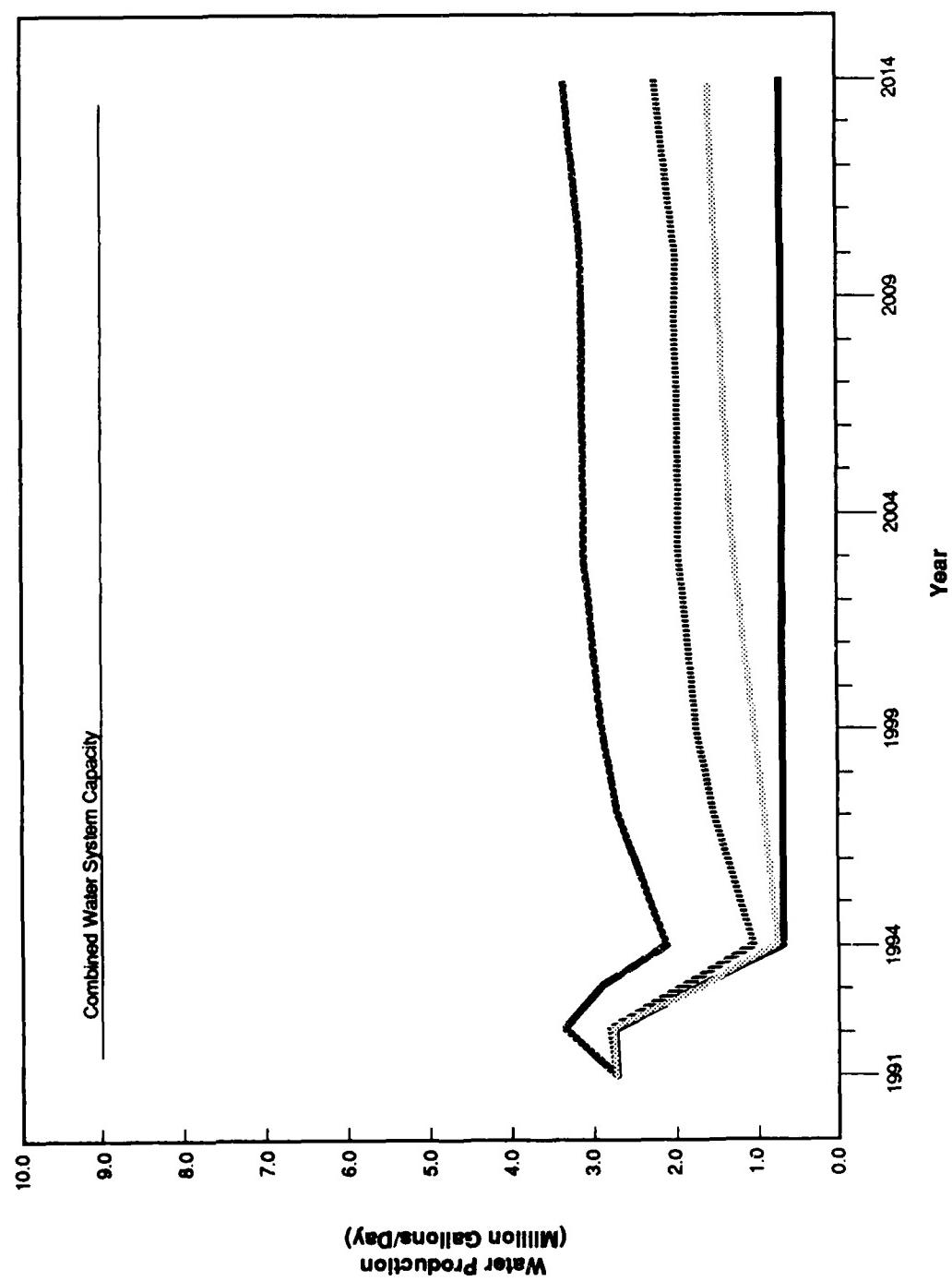


Figure 4.2-13

operating reliably over a wide range of demand levels and it is currently operating satisfactorily at an expected annual average rate of 1.5 MGD, no appreciable problems or consequent impacts associated with temporarily reduced demands are expected.

The delivery capacity of the combined supply would exceed the largest potential demand projected under the Proposed Action (3.4 MGD) by nearly a factor of three. Some level of design and construction for new or relocated supply lines would be expected. Utility corridors or easements would need to be established throughout the former base area, because none presently exist. No other major modifications or appreciable effects to the potable water system are projected as a result of the Proposed Action. The need for utility corridors and easements would apply similarly to all existing base utilities.

Wastewater. Under the Proposed Action, all wastewater generated in the Village of Rantoul and in the reuse area would continue to be collected and routed to the Village of Rantoul WWTP for processing. The Village would assume responsibility for the wastewater collector system in the reuse area.

Figure 4.2-14 shows the estimated average daily volume of wastewater influent to the Rantoul WWTP from all sources from 1991 to 2014 for the Proposed Action and for each of the three alternatives. Under the Proposed Action, influent volumes to the WWTP from the reuse activities and the Village would reach a minimum of 2.6 MGD in 1994, and then rise to a maximum of 3.1 MGD in 2014.

The Proposed Action would develop wastewater streams from enterprises similar to pre-existing ones, with the major exception of aircraft maintenance activities. Although accidental discharges into sewer systems of undesirable materials such as petroleum products are possible, they are rare from well-managed facilities of this type; in this situation the source should be easily identifiable for appropriate corrective action. Some activities potentially associated with aircraft maintenance, such as electroplating, could require pretreatment of process wastewater prior to discharge into the collectors feeding the Rantoul WWTP. Such pretreatment, if necessary, must conform with the requirements of federal and State of Illinois regulations designed to reduce the associated hazards to acceptable levels. These requirements would be met during the facility design process.

Because reuse activities would begin prior to closure, wastewater flows from the base associated with the Proposed Action are estimated to decline to a minimum of about 1.3 MGD. As activities under the Proposed Action increase, the volume of wastewater influent to the WWTP would rise. By the year 2014, the projected average flow from the base would increase to approximately 1.7 MGD.

In the year 2014 (wastewater generation rate of 1.7 MGD), the average daily quantity of wastewater to be collected in the reuse area and transmitted to the WWTP would be less than 45 percent of the design capacity of the single

**Rantoul and
Chanute AFB
Wastewater
Treatment-
All Alternatives**

Average Daily Wastewater Treatment: 1991-2014

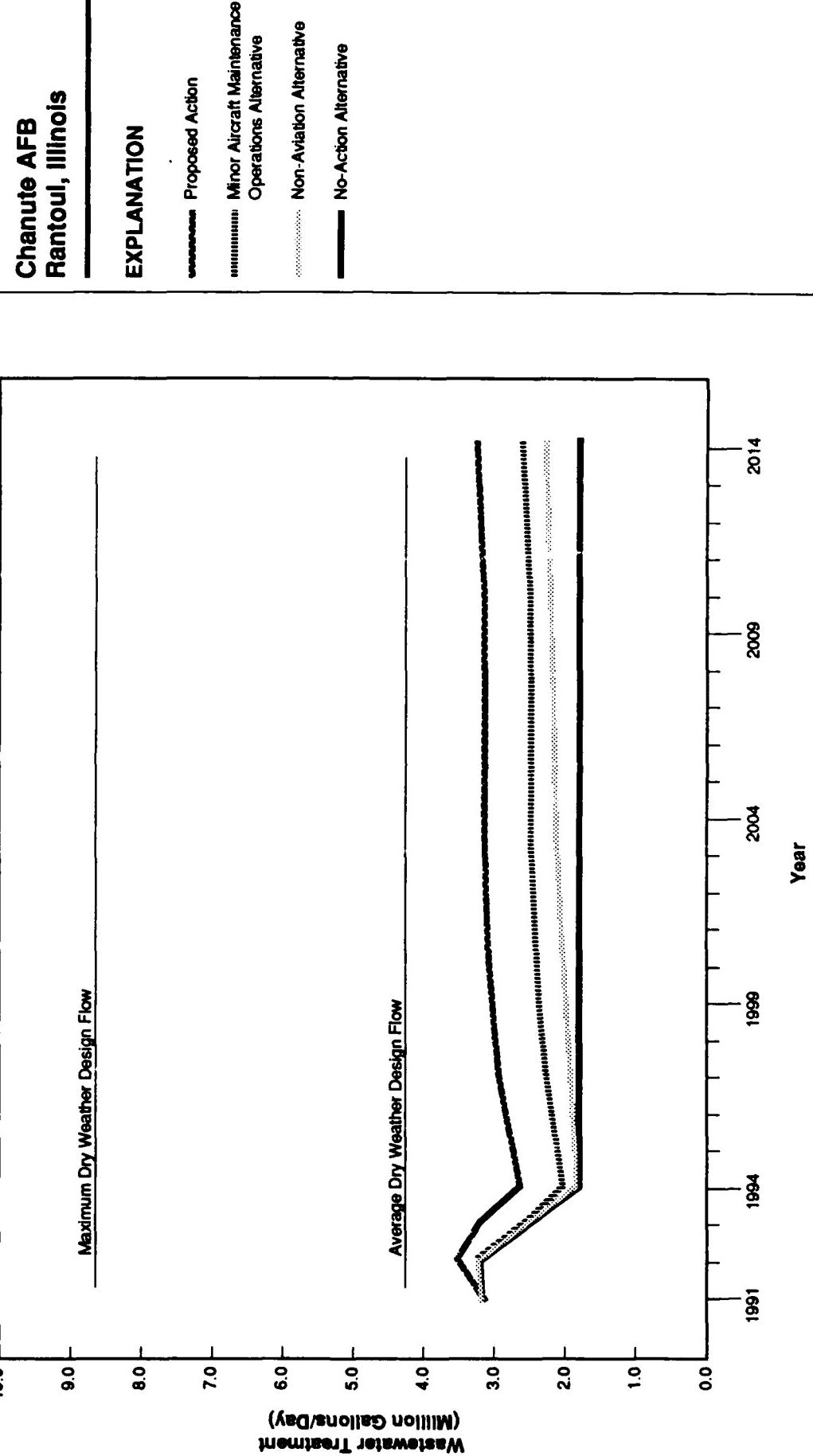


Figure 4.2-14

20-inch force main in the pumping station at Eagle and Heritage drives (Section 3.2.5.2). Wastewater currently is routed from the base to the Rantoul WWTP by both the 20-inch force main and a gravity sewer that serves the housing area in the northeast part of the base. The force main is fed by the pump station described above and a smaller one in the industrial area of the base. A new connection to the existing collection system would be required from the proposed maintenance facility in the aviation support area. Any minor adjustments to the Rantoul WWTP that would be required would not likely be eligible for federal funds under the Airport Improvement Program.

Solid Waste. Figure 4.2-15 shows the estimated volume of refuse disposed of from 1991 to 2014. This estimate includes contributions from the preclosure on-base requirements of the Air Force, from direct and indirect worker activities in the reuse area, and from the resident population of Rantoul and the surrounding area. No allowance is made for direct construction activities, although these activities could contribute minor amounts of waste.

Large-volume wastes, such as demolition materials, cannot be deposited in the Rantoul landfill. If a new county landfill is not available at the time of closure of the Rantoul landfill, Rantoul's wastes would likely be transported to the H&L landfill facility in adjacent Vermilion County. The estimated volume of waste generated from the Rantoul service area under the Proposed Action in 1995 would be about 74,000 cubic yards per year, which would represent approximately 1.1 percent of the 1990 remaining capacity of the H&L landfill and a 10.9-percent increase over its 1990 disposal rate.

Under the Proposed Action, conceptual plans identify the demolition of over 500,000 square feet of existing facilities. This material would contain both inert (e.g., stone, concrete) and non-inert (e.g., wood, paper products, plastics) materials, including some asbestos-containing materials. Current restrictions would not permit disposal of this material in the Village of Rantoul landfill. Illiana Waste System operates a permitted solid waste landfill in Milford, Illinois, approximately 35 miles from Rantoul. There is sufficient capacity for this landfill to receive asbestos solid waste until approximately 1997. Chanute AFB has sent ACM to this facility. This facility requires that the asbestos waste be transported in closed containers. In addition, a new solid waste landfill is scheduled to open in 1991 and is located in Hooperston, Illinois, approximately 35 miles from Rantoul. This facility may also accept debris with asbestos-containing material. There are numerous landfills in surrounding counties that are licensed to accept demolition debris. The H&L landfill is the closest site that can accept non-hazardous demolition debris. The volume of demolition material from Chanute AFB would represent approximately 0.4 percent of the remaining volume of the H&L landfill.

Energy. Under the Proposed Action, the Village of Rantoul would assume responsibility for all energy-related utilities to the reuse area, except natural gas, which would continue to be supplied by the NIGC. This impact analysis assumes that the existing central heating plant would continue to operate and would remain coal fired. Alternatively, this plant could be converted to another fuel, such as oil or natural gas, or the plant could be partially or entirely replaced

**Rantoul and
Chanute AFB
Solid Waste
Disposal-
All Alternatives**

Total Solid Waste Disposal: 1990-2014

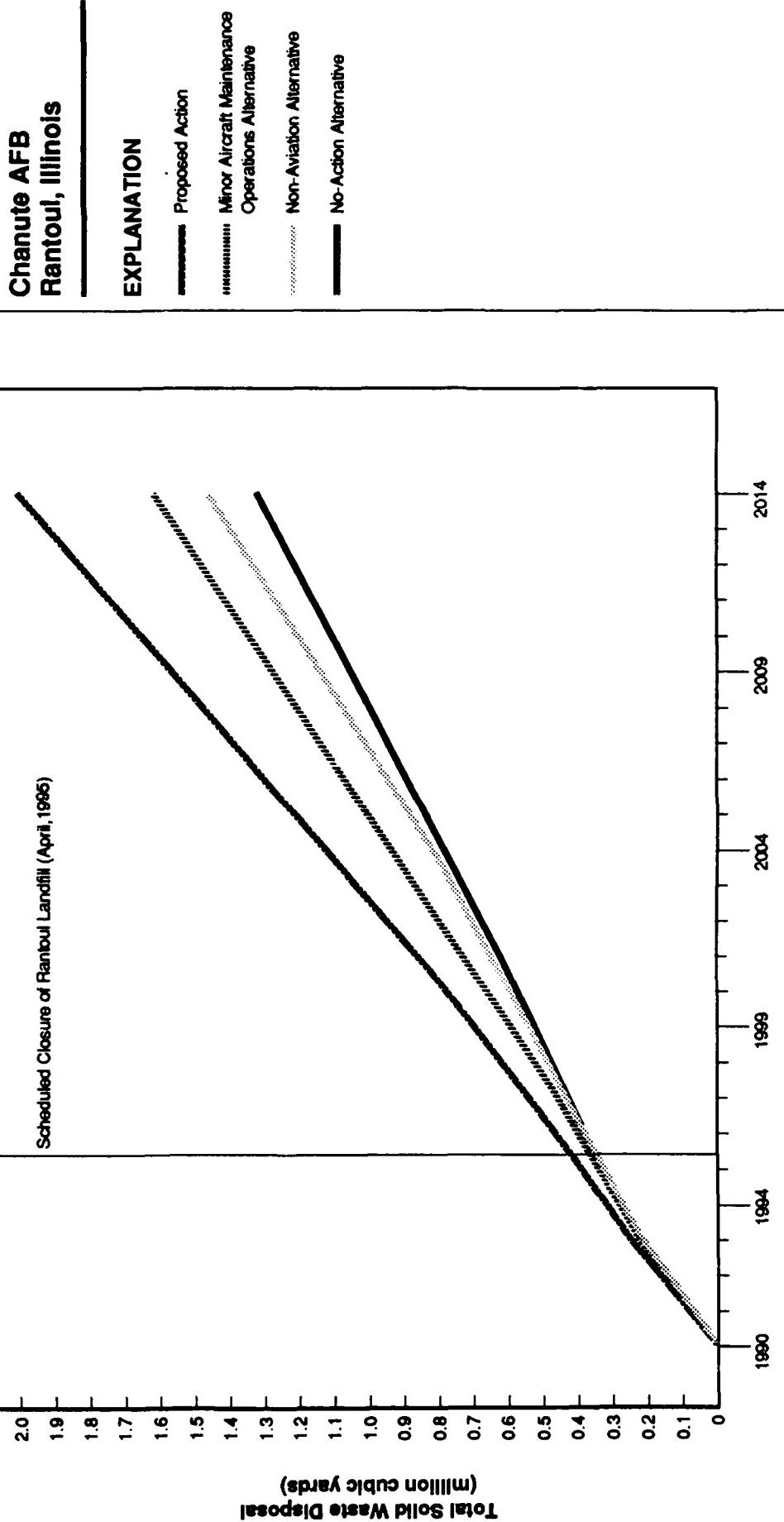


Figure 4.2-15

with natural gas space heating systems installed in each of the existing buildings and facilities. In either case, the quantity of the alternative fuel required would be roughly equivalent in thermal energy to that provided by coal, except for changes in plant and distributional efficiency.

Electricity. Integration of the electrical supply systems (for the Village of Rantoul and the reuse area) would, at a minimum, require metering of the facilities to be served within the area formerly comprising Chanute AFB and establishment of appropriate utility corridors and easements.

Figure 4.2-16 shows the estimated average daily demand from 1991 to 2014 for the Proposed Action and for each of the three alternatives, excluding very small amounts required for direct construction activities (e.g., incidental loads for operating electrically-powered tools and equipment and temporary security lighting). The estimate includes contributions from the preclosure on-base requirements of the Air Force, from direct and indirect worker activities in the reuse area, and from the resident population of the Village of Rantoul. Average demand is projected to decline to a minimum of 283 megawatt-hours per day (MWH/day) in 1994 and then rise to a maximum of 396 MWH/day in the year 2014. Decreased demand presents no problem to the system, and the peak demand is well within the supply capabilities of the system.

Because the Village of Rantoul and Chanute AFB electrical systems have been designed to operate independently and the projected peak loads would not be expected to differ appreciably from present ones, no major change to the Rantoul system would be required to accommodate the Proposed Action.

Within Chanute AFB, the base-owned substation and electrical distribution system is well maintained and in good condition. Base peak power demand over the past several years is reported to be about 14,000 to 17,000 kVA and the substation has an excess capacity of 18,000 to 21,000 kVA available for expansion (EDAW et al., 1990). Therefore, over 100 percent reserve capacity is presently available to accommodate additional needs.

The on-base electrical distribution system is arranged in a loop-feed configuration so that service can be supplied from alternative circuits if failures occur. The system is adequate under present loads. Specific development requirements could be met by minor extensions of the system, if necessary.

The aircraft maintenance facility associated with the Proposed Action would be supplied from a 69-kV loop circuit, and power could be derived from two substations drawing from separate primary sources (State of Illinois, 1990). The proposed loop would run south along Murray Avenue from an existing CIPS line to Chandler Road, then eastward to Paxton Road, northward to the northern boundary of the wastewater treatment plant property, and then westward to the existing Village of Rantoul substation. An ROW would have to be established for such a line. Adequate power is available to provide the projected load for this and all other facilities associated with the Proposed Action through the year 2014.

**Rantoul and
Chanute AFB
Electricity
Consumption-
All Alternatives**

Average Daily Electric Consumption: 1991-2014

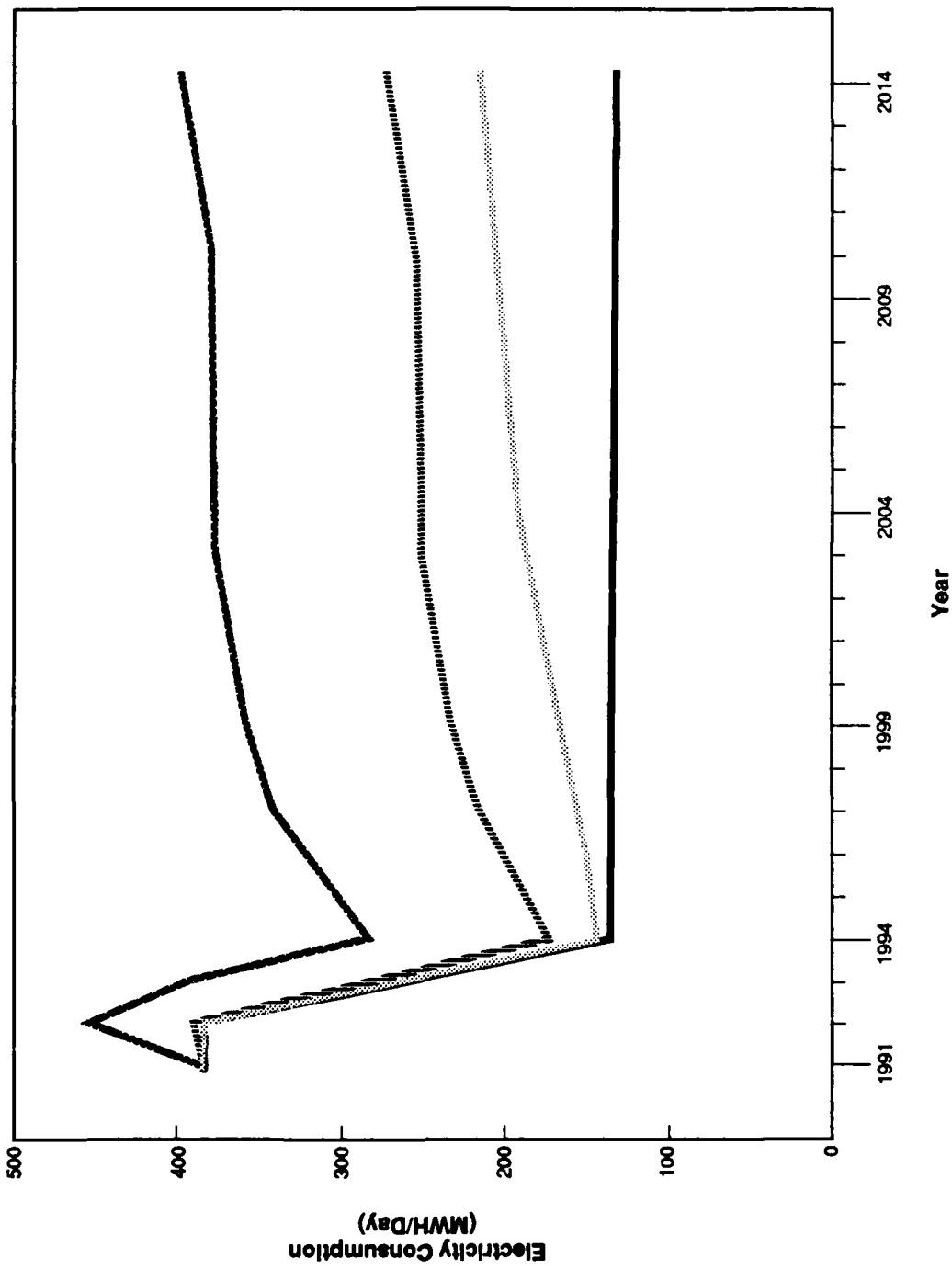


Figure 4.2-16

Metering would be required at least for all of the services not supported by the Village of Rantoul and could be desirable for cost monitoring and accountability of some public-supplied services. Some of the larger buildings have several connection points of various voltages, all of which would have to be metered if electrical power was to be sold to individual tenants.

Natural Gas. Under the Proposed Action, natural gas would continue to be supplied to both the Village of Rantoul and to the reuse area by the present commercial supplier, NIGC. However, within the reuse area, in place of a single user (i.e., the Air Force), multiple users would be involved. Questions relating to ROWs, ownership and maintenance of facilities, and metering of the individual facilities to be served would, therefore, need to be resolved.

Under the Proposed Action, metering of the additional individual properties to be served would be required and ownership and maintenance responsibility for the on-base facilities transferred from the Air Force to NIGC. ROWs for the existing lines to the gas company would also have to be established. Similar considerations apply to the lines from the small gas-fired heating plant in the base industrial area and to its connections to the facilities that it serves.

Figure 4.2-17 shows the average daily natural gas demand for the period 1991 to 2014 for the Proposed Action and for each of the three alternatives. Existing natural gas service in the Village of Rantoul would be essentially unaffected, except for the changes in demand associated with population changes. Requirements for service to the reuse area could grow substantially, because the per-capita-based projections do not fully account for the potential demand for natural gas associated with the proposed aircraft maintenance facility. That facility could require peak gas consumption at a rate of approximately 2 million therms per month. However, NIGC foresees no problems in meeting the resultant total demand. The company has a 4-inch, 450-psi gas line running north-south just east of the base through the proposed site for the aircraft maintenance facility. It is connected to a 6-inch, 450-psi transmission line running east-west on the north side of U.S. 136. This gas main is capable of serving large commercial and industrial customers. The line would be relocated to avoid both the new facility and the runway extension (State of Illinois, 1990). A new ROW would have to be established for relocated portions of this 4-inch line. No appreciable impacts are expected in connection with this energy source.

Coal. The central heating plant housed in Building 46, which serves a substantial area of the base, is coal fired. Its conversion to commercial use would require formal designation of ROWs for the lines to the facilities served and establishment of an appropriate method of reimbursement for service. This facility was placed in service in 1939 and, although a half-century old, has been relatively well maintained. It would be renovated and remain in service under the Proposed Action.

**Rantoul and
Chanute AFB
Natural Gas
Consumption-
All Alternatives**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- Proposed Action
- Minor Aircraft Maintenance Operations Alternative
- Non-Aviation Alternative
- No-Action Alternative

Average Daily Natural Gas Consumption: 1991-2014

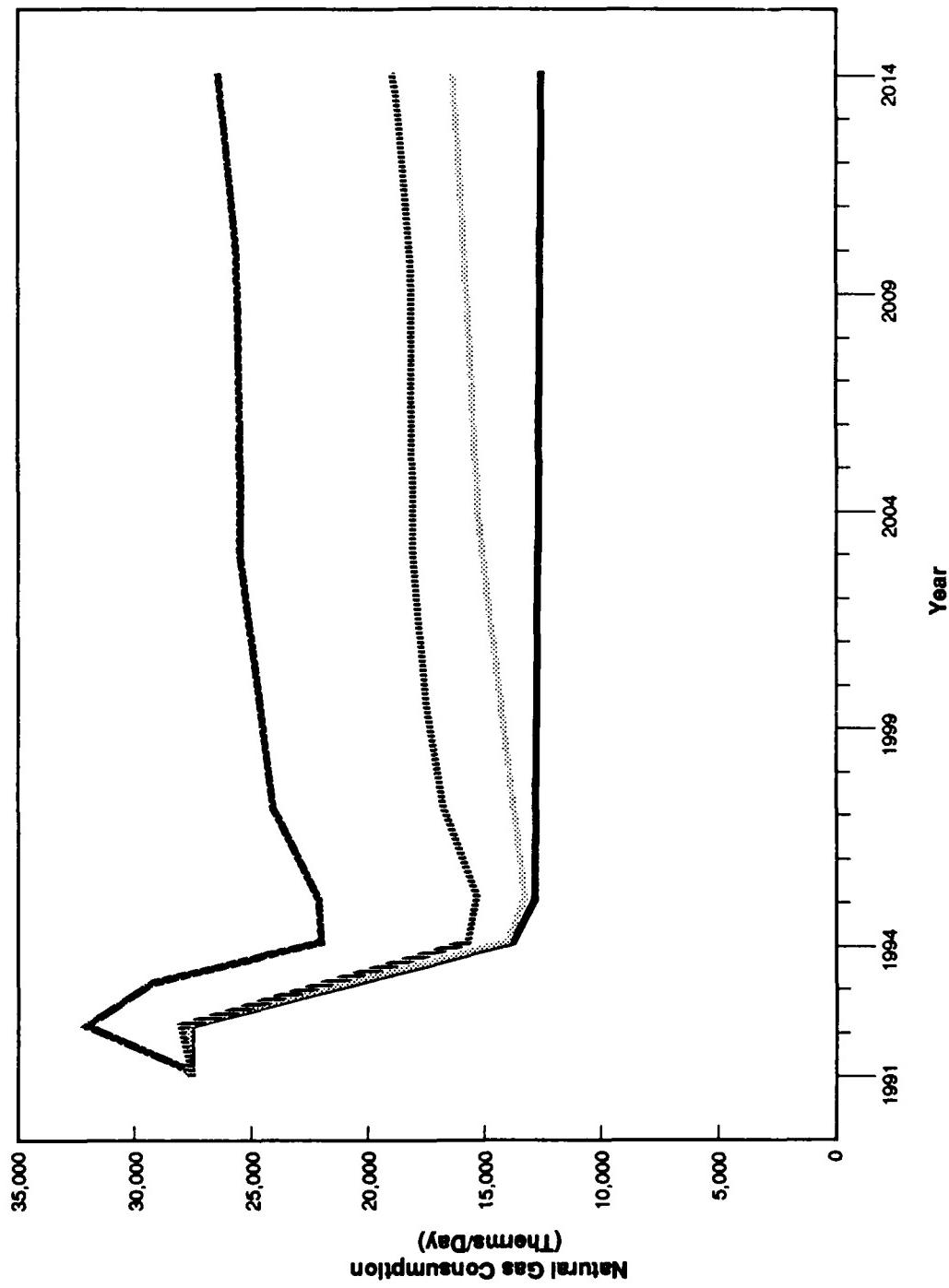


Figure 4.2-17

Figure 4.2-18 shows the estimated average daily coal consumption for this facility from 1991 to 2014 under the Proposed Action and for each of the three alternatives. The 1988 average consumption of 93 tons per day is projected to be reached by 2011. However, because of various improvements in facilities recently completed by the Air Force, the plant can meet current demand while operating at only approximately 50 percent of its capacity (EDAW et al., 1990). Consequently, satisfactory operation of the plant through 2014 would likely be possible and no impacts on its service are projected. Chanute AFB's coal supplier for the past 10 years, the Black Beauty Coal Company in Evansville, Indiana, has indicated that the reduction in coal requirements at Chanute would not have a major impact on their company.

Cumulative Impacts. The demolition of the existing structures and the construction of new buildings at Chapman Court would generate approximately 36,000 cubic yards of additional construction rubble. Disposal of this debris would be subject to the same restrictions and regulations as discussed for disposal of Chanute AFB demolition debris. Current restrictions would not permit disposal of non-inert materials in the Rantoul landfill. A disposal facility, yet to be designated, would be required for the material. The H&L landfill is the closest site that can accept non-hazardous demolition debris. The volume of demolition material from Champan Court would represent approximately 0.6 percent of the remaining capacity of the H&L landfill.

The cumulative effect of Chapman Court debris combined with debris produced by Proposed Action activities would be 62,000 cubic yards of material. This amount of material would represent about 1.0 percent of the remaining capacity of the H&L landfill, if all materials were disposed of in that facility.

Mitigation Measures.

Water Supply. No adverse impacts are expected from reduced flow; therefore, no mitigation measures would be necessary.

Wastewater. Under the Proposed Action, wastewater flows are anticipated to increase to levels within the design capacity of the WWTP. In fact, reuses should begin before final base closure and so should, to some extent, offset the reduced flows associated with drawdown of base activities. Although some temporary minor adjustments and a higher degree of maintenance than is commonly necessary may be required, no modifications in the plant or operations should be required.

Solid Waste. Reuse of inert demolition wastes as rip-rap or fill material would decrease the potential impact on landfills.

Energy. No adverse impacts are expected as a result of reduced demand; therefore, no mitigation measures would be necessary.

**Rantoul and
Chanute AFB
Coal Consumption-
All Alternatives**

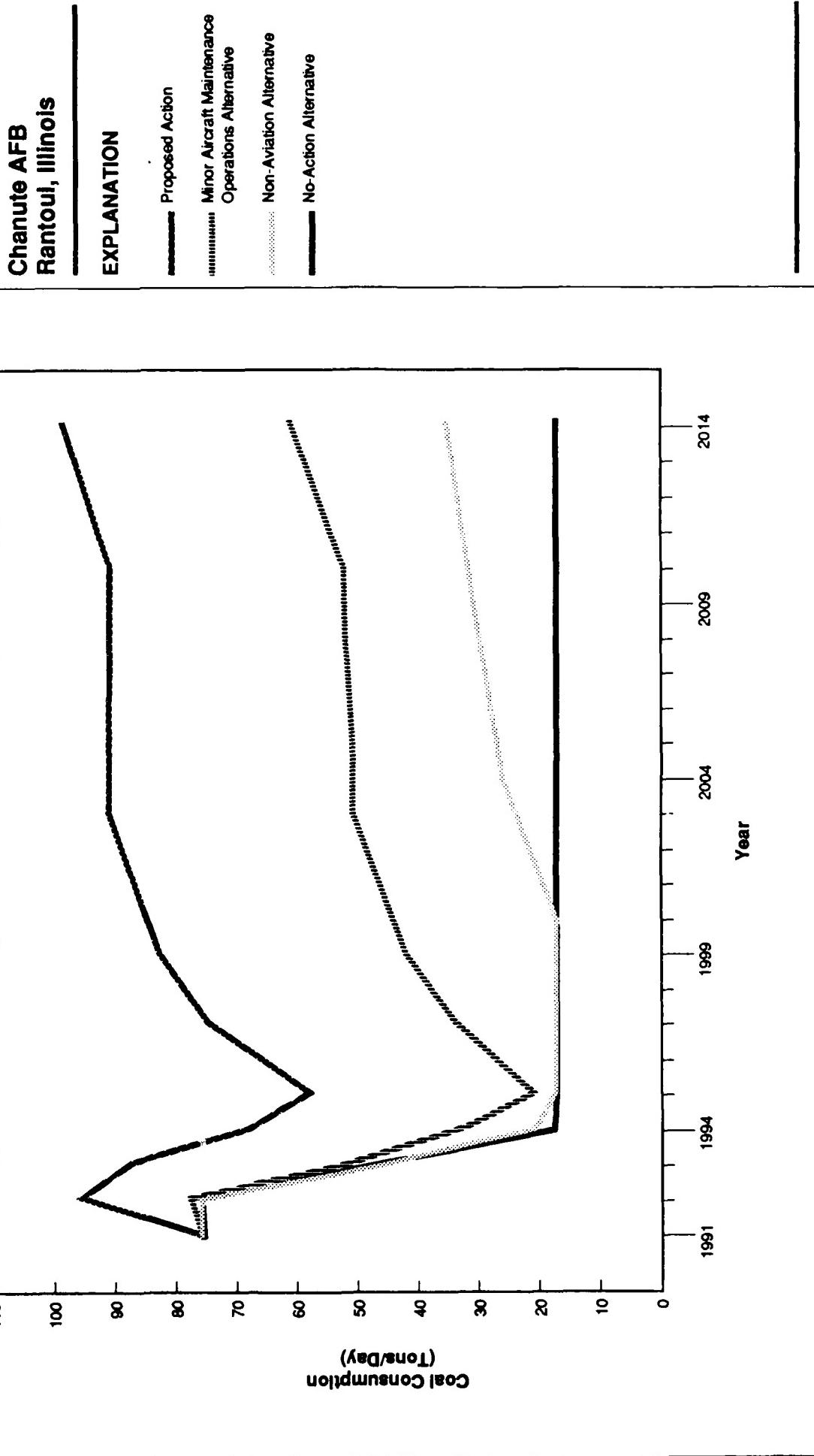


Figure 4.2-18

4.2.4.2 Minor Aircraft Maintenance Operations Alternative.

Water Supply. The Minor Aircraft Maintenance Operations Alternative would require somewhat less water than would the Proposed Action, but otherwise would be similar (Figure 4.2-13). No adverse impacts on this resource are expected. Fewer utility corridors and easements would have to be established than for the Proposed Action.

Wastewater. A more extensive and more protracted reduction in wastewater flows would occur under this alternative than under the Proposed Action, and the long-term volume in 2014 would be appreciably less (Figure 4.2-14). Impacts would be similar to those projected for the Proposed Action. Any minor adjustments to the Rantoul WWTP that would be required would not likely be eligible for federal funds under the Airport Improvement Program.

Solid Waste. This alternative would result in a somewhat lower rate of waste disposal to the Rantoul landfill than was projected for the Proposed Action (see Figure 4.2-15). If a new county landfill is not available at the time of closure of the Rantoul landfill, Rantoul's wastes would likely be transported to the H&L landfill facility in adjacent Vermillion County. The estimated volume of waste generated from the Rantoul service area under the Minor Aircraft Maintenance Operations Alternative in 1995 would be about 58,000 cubic yards per year, which would represent approximately 0.9 percent of the 1990 remaining capacity of the H&L landfill and an 8.5-percent increase over its 1990 disposal rate. On-site demolition, with the attendant requirement for disposal of wastes, would be approximately the same as for the Proposed Action and the associated impacts would be essentially equivalent. The disposal of demolition materials, however, would likely occur at a slower rate and over a longer period of time.

Energy. Energy demands for the Minor Aircraft Maintenance Operations Alternative would be less than those for the Proposed Action (Figures 4.2-16, 4.2-17 and 4.2-18). ROWs would have to be established for on-base areas only. No appreciable impacts on energy resources are projected.

Cumulative Impacts. Disposal of demolition debris resulting from this alternative and the disposal of Chapman Court would create cumulative impacts similar to those of the Proposed Action. Base demolition material, however, would likely be disposed of at a slower rate than under the Proposed Action.

Mitigation Measures.

Water Supply. No adverse impacts are expected, therefore, no mitigation measures would be necessary.

Wastewater. Under this alternative, wastewater flows to the WWTP are expected to be lower than under the Proposed Action. It is likely that modifications in the collection system and a higher degree of maintenance than

is commonly necessary may be required. Effluent discharged from the plant should continue to meet regulated discharge standards.

Solid Waste. The same mitigation as suggested for the Proposed Action would also apply to this alternative.

Energy. No adverse impacts are expected; therefore, no mitigation measures would be necessary.

4.2.4.3 Non-Aviation Alternative.

Water Supply. The Non-Aviation Alternative would require substantially less water than the Proposed Action and slightly less water than the Minor Aircraft Maintenance Operations Alternative (Figure 4.2-13). No adverse impacts on this resource are expected.

Wastewater. The Non-Aviation Alternative would result in a more extensive and more protracted reduction in wastewater flows than either the Proposed Action or the Minor Aircraft Maintenance Operations Alternative, and the long-term demand in 2014 also would be lower (Figure 4.2-14). Impacts would be similar to those projected for the Proposed Action and Minor Aircraft Maintenance Operations Alternative.

Solid Waste. The Non-Aviation Alternative would result in an even lower rate of waste disposal to the Rantoul landfill than was projected for the Minor Aircraft Maintenance Operations Alternative (Figure 4.2-15). If a new county landfill is not available at the time of closure of the Rantoul landfill, Rantoul's wastes would likely be transported to the H&L landfill facility in adjacent Vermillion County. The estimated volume of waste generated from the Rantoul service area under the Non-Aviation Alternative in 1995 would be about 52,000 cubic yards per year, which would represent approximately 0.8 percent of the 1990 remaining capacity of the H&L landfill and an 8.0-percent increase over its 1990 disposal rate. The amount of on-site demolition, with the attendant requirement for disposal of wastes, would be only slightly lower than for the Proposed Action and the associated impacts would be similar.

Energy. Energy demands for the Non-Aviation Alternative would be less than those for the Minor Aircraft Maintenance Operations Alternative (Figures 4.2-16, 4.2-17, and 4.2-18). ROWs would have to be established on base. No appreciable impacts on energy resources are projected.

Cumulative Impacts. Disposal of demolition debris resulting from this alternative and the disposal of Chapman Court debris would create cumulative impacts slightly lower than those of the Proposed Action. Base demolition material would likely be disposed of at a slower rate than under the Proposed Action.

Mitigation Measures.

Water Supply. No adverse impacts are expected; therefore, no mitigation measures would be necessary.

Wastewater. Under this alternative, wastewater flows to the WWTP are expected to be lower than under the Proposed Action. It is likely that modifications in the collection system and a higher degree of maintenance than is commonly necessary may be required. Effluent discharged from the plant should continue to meet regulated discharge standards.

Solid Waste. The same mitigation suggested for the Proposed Action would also apply to this alternative.

Energy. No adverse impacts are expected; therefore, no mitigation measures would be necessary.

4.2.4.4 No-Action Alternative.

Water Supply. No adverse impacts on water supply are projected under the No-Action Alternative.

Wastewater. The low-flow conditions under the No-Action Alternative would present the greatest potential for impacts to the WWTP. The Village of Rantoul is currently operating below the minimum design flow for the plant. Wastewater treated at the plant meets all effluent discharge standards. However, procedures implemented to address the low flow wastewater conditions may place additional strain on plant equipment.

The more notable of the low-flow related problems could be expected to occur in the force main systems. The volume of the wet well and the rate of wastewater flow determine the retention time of the system. The Illinois Recommended Standards for Sewage Works require that the retention time not exceed 30 minutes at the design average flow. Excessive retention times can result in septic conditions, with attendant generation of malodorous, corrosive, toxic, and potentially explosive gases.

The pumping system for wet wells must be sized appropriately for the expected flow. Pump stations must be designed to handle both the average flow and normal daily and seasonal fluctuations encountered in service. The existing pump stations have large pumps designed to run almost continuously to transport the average flow, and smaller pumps that control the fluctuations. Flows are anticipated to drop appreciably for a period of years under the No-Action Alternative. The flow rate is expected to drop below the capacity of the large pumps, but remain above the capacity of the smaller ones. The large pumps would, therefore, cycle on and off continuously. Because of their large starting currents, the motors for the larger pumps would constantly overheat, necessitating excessive maintenance and replacement.

A specific potential problem of this type has been identified in the pumping station at Eagle and Heritage drives. This station pumps into a 20-inch diameter force main that extends to the WWTP. This station is rated at 1.8 MGD dry weather flow and 3.92 MGD at maximum daily flow. The pumps were sized to accommodate the infiltration/inflow problem in the upstream sewers and future expansion. With substantially reduced flow, this equipment would be oversized and would not function properly.

Low flow also may result in velocities that are inadequate to keep the affected sewers flushed out. For less severe conditions, increased maintenance should provide an adequate response. Rerouting of the wastewater streams could be required or desirable, depending on the actual conditions encountered as the area is developed.

Lower flows to the WWTP may cause excessive cycling of the pumps in the WWTP, resulting in heat build-up in the motors and controls and possible failure. Problems with long retention times could occur at the WWTP as at the force main wet well. Reduced flow rates to the units, clarifiers, and packed tower biological reactors could reduce the loading rates to these units below design parameters and the efficiency of the units would drop drastically.

Under the No-Action Alternative, wastewater flows in the year 2014 would still be significantly below the minimum plant design flow. Equipment breakdown and failure may increase as a result of the inefficient operation of the facilities (e.g., pumps not run at optimum design rates). In the event plant modifications are not made and the operations and maintenance budget is not sufficient to maintain plant performance, treated effluent discharged may exceed discharge standards.

Solid Waste. No adverse impacts associated with solid waste disposal are projected under the No-Action Alternative.

Energy. No adverse impacts on energy are projected under the No-Action Alternative.

Cumulative Impacts. There are no known local or regional planned developments that, when added to those projected for the No-Action Alternative, would result in impacts substantially different from those discussed above.

Mitigation Measures.

Water Supply. No adverse impacts are expected; therefore, no mitigation measures would be necessary.

Wastewater. The low-flow conditions under the No-Action Alternative would present the greatest potential for impacts to the WWTP of all alternatives. Based

on a preliminary analysis, the following potential modifications have been suggested:

- Mitigate septic condition in lift stations by supplementing with non-potable water or using a hydrogen peroxide feed system
- Replace 12-inch transfer pumps at treatment plant with 10-inch pumps
- Remove clarifiers and packed towers from service
- Retain only one trickling filter tower and one nitrification tower in operation.

Solid Waste. No adverse effects are expected; therefore, no mitigation measures would be necessary.

Energy. No adverse impacts are expected; therefore, no mitigation measures would be necessary.

4.3 HAZARDOUS MATERIALS/HAZARDOUS WASTE

This section addresses the potential impacts of existing contaminated sites on the various reuse options, and the potential for environmental impacts caused by hazardous materials/waste management practices associated with the reuse options. Hazardous materials, IRP sites, USTs, above-ground storage tanks, asbestos, pesticides and herbicides, and radon will be discussed within this section. PCB-contaminated equipment and biohazardous waste will be removed prior to closure.

The impact assessment is based on the application of explicit regulatory standards for determining hazardous materials/waste requirements for the Proposed Action and the alternatives. The following criteria were used to identify the potential for significant impacts:

- Inadvertent release of friable asbestos during the demolition or modification of a structure
- Generation of 100 kilograms (or more) of hazardous waste or 1 kilogram (or more) of an acute hazardous waste in a calendar month, resulting in increased regulatory requirements
- New operational requirements or change of service for all UST and tank systems
- Any spill or release of a reportable quantity of a hazardous material
- Manufacturing of any compound that results in the requirement of regulatory notification for this activity
- Exposure of the environment or the public to any hazardous material through release or disposal practices.

4.3.1 Proposed Action

Hazardous Materials Management. The hazardous materials that are likely to be used are summarized in Table 4.3-1. The types of most hazardous materials used under the Proposed Action would be similar to those used prior to base

Table 4.3-1. Proposed Action Hazardous Material Usage

Land Use Zones	Operation Process	Hazardous Materials
Airfield	Refueling/deicing	Jet fuel, aviation fuel, propylene glycol and ethylene glycol
Aviation Support	Maintenance, firefighting, emergency response training	Fuel, solvents, paints, degreasers, corrosives, heavy metals, reactives, thinners, ignitables, shipping of hazardous materials
Education/Training	Higher education pilot training, automotive training, aviation-related technical education	Fuel, ignitables, laboratory waste, solvents
Medical	Hospital, dental clinic, child care center	Medical biohazardous waste, heating oils, heavy metals, chemotherapeutic and radiological sources
Commercial	Computer center, dry cleaners, warehouse, gas station	Fuels, solvents, corrosives, ignitables, heating oils, waste oils, dry cleaning solvent
Recreation/ Open Space	Golf course, youth center, recreation lake, recreation facilities, aircraft display museum	Cleaners and solvents, pesticides, fungicides, herbicides, aerosols, heating oils, chlorine
Residential	Low income housing, family housing, club, swimming pool, life care facility	Pesticides, herbicides, waste oils, chlorine, household waste
Industrial	Light industrial	Solvents, waste oils, heavy metals, corrosives, catalysts, aerosols, fuels, heating oils, ordnance

closure. Current aircraft maintenance training, vehicle and fire truck maintenance training, and oil analysis training utilize types of hazardous materials similar to those of the proposed aircraft maintenance facility. The quantity of hazardous materials utilized under this Proposed Action would likely increase over closure baseline conditions. Under the Proposed Action, the amount of aviation-related maintenance would increase greatly over the existing conditions; fuel transportation and consumption would also likely increase.

There would be a major change in the handling of hazardous materials under the Proposed Action. Currently, a single organization (DOD) manages all of the hazardous materials used by the base. Under the Proposed Action, each organization would be required to transport and manage these materials under the applicable regulations. Each independent user would be required to comply with SARA Section 311, Title III, concerning community right-to-know and emergency response inventories. There may no longer be an on-site organization capable of responding to hazardous materials and hazardous waste spills. Additional emergency response support from the Village of Rantoul may be needed.

Hazardous Waste Management. The eight proposed land use zones would host many operations that are yet to be determined. This section describes the types of hazardous waste that may be used in these land use zones. Project description plans are not sufficiently detailed to allow the estimation of specific quantities and all possible waste streams.

The Air Force's policy of centralizing hazardous waste management, procurement, storage, and disposal would be replaced by separate, independent generators of hazardous waste. All applicable regulations concerning hazardous waste would become the responsibility of the new generators. This would require that agencies with the new responsibilities are proficient with hazardous materials and waste management and spill responses. Mutual aid agreements with surrounding communities may require additional scrutiny and additional training of emergency staff.

The presence of numerous independent owner/operators on the base would change the regulatory requirements and probably lessen the regulatory burden for the management of hazardous waste. Many of the new independent operators that produce hazardous waste may become conditionally exempt, small-quantity generators. The options for waste minimization and recycling may increase.

Installation Restoration Program Sites. The extent of contamination at all sites has yet to be delineated and both the risk assessments and remedial designs are yet to be scheduled. The Air Force has committed in the MOU (Appendix F) among the Air Force, Illinois EPA, IDOT, and the Village of Rantoul to continue the IRP activity regardless of the reuse options.

Conveyance of some properties from the Air Force may be delayed as a result of the Air Force's remediation efforts. Ongoing IRP activities at identified IRP sites may affect reuse in the following four proposed areas (Figure 4.3-1):

- **Airfield.** The airfield land use and the potential extensions and expansions of Runway 18 to the south and/or future taxiway needs may affect the pending capping of Landfill Site 1 and Fire Protection Training Area 1.
- **Industrial.** The western portion of the proposed industrial land use area is situated above the entire Landfill Site 3. Capping this landfill is the likely remedial design for this site. The structural constraints for the cap design may preclude the use of this area for buildings or construction. Properly designed impervious surfaces that allow for buildings and consider methane generation problems may permit development in this area with regulatory approval.
- **Aviation Support.** Development of the southeastern portion of the base, proposed for aviation support, may be in conflict with portions of the IRP processes. This area is underlain by Landfill Site 4, the tank sludge disposal pit, and the additional IRP sites of Buildings 922, 995, 51, and 58. Cap design limitations for Landfill Site 4 may present structural constraints to development. The aviation support area also encompasses the south-central portion of the base and would include the areas occupied by the current Fire Training Area 2. A newly designed fire training pit and the remediation of existing contamination from past and current practices would be required to accommodate the fire suppression training activities that are anticipated for this area.

**IRP Sites-
Proposed Action**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- | IRP Sites | Land Use |
|-----------|--|
| ■ | ① Airfield |
| | ② Aviation Support |
| | ③ Institutional (Educational/
Training) |
| | ④ Industrial |
| | ⑤ Institutional (Medical) |
| | ⑥ Commercial |
| | ⑦ Public/Recreation |
| | ⑧ Residential |

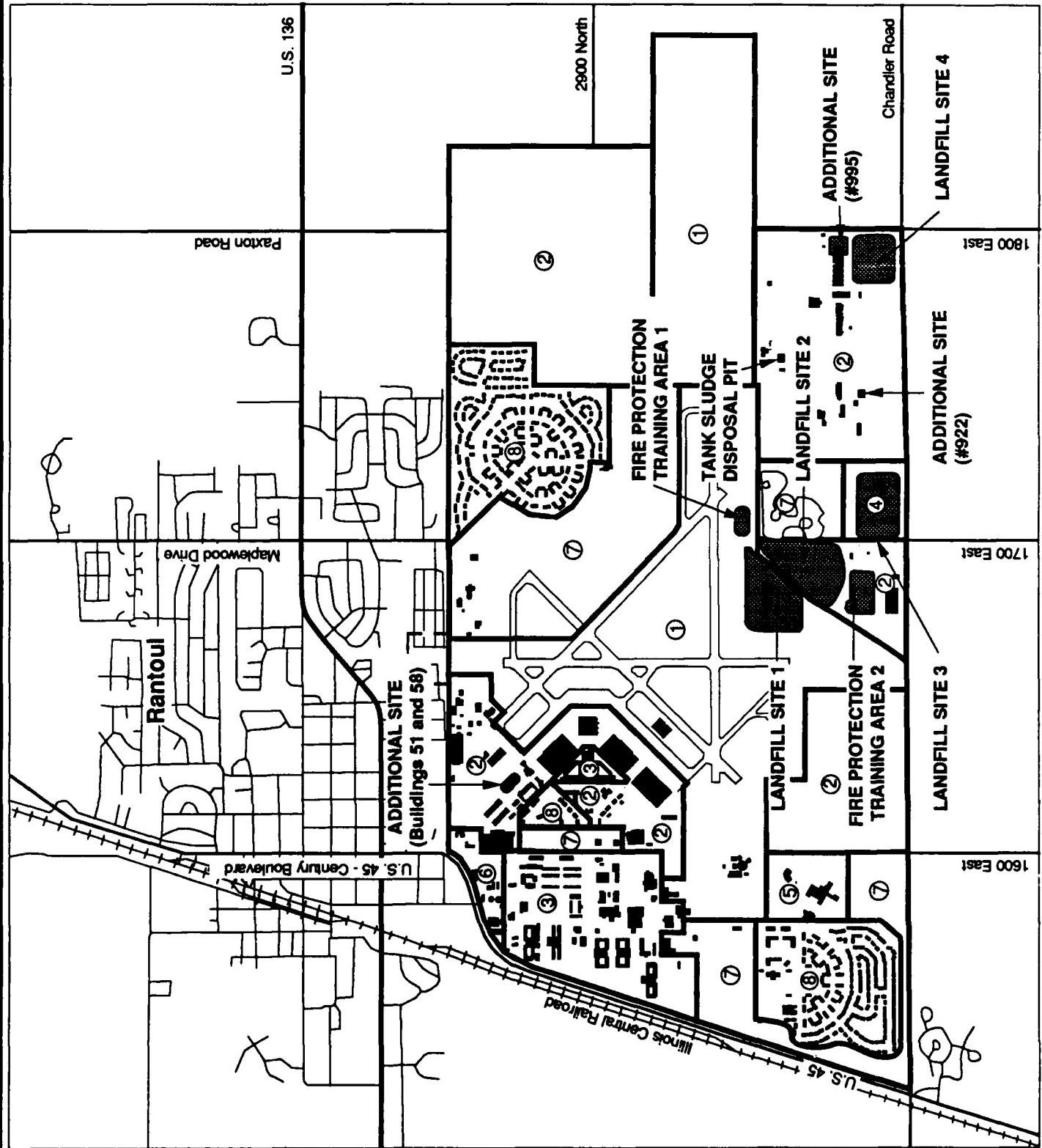
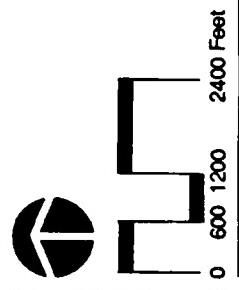


Figure 4.3-1

- The western portion of the aviation support area adjacent to Heritage Lake overlies Landfill Site 2 and may be affected by this site. The cap design for remediation may preclude traffic and pedestrian use. Designs that meet groundwater remediation requirements for Landfill Site 1 and the Fire Training Area 1 may be located in these downgradient locations surrounding Heritage Lake.

The use of the southeastern portion of the base would require consideration of the monitoring well locations and the limitations of future use of the area pending regulatory review of the remedial design for the IRP sites (Table 4.3-2). The regulatory review process would include the notification to the FAA concerning the construction and locations of any monitoring wells.

Table 4.3-2. Potential IRP Site Impacts on Reuse

Proposed Land Use	IRP Sites of Concern	Proposed Remediation	Potential Reuse Impacts
Airfield	Landfill Site 1	Cap landfill	Extension/expansion for runways/taxiways may impact the remedial design
	Fire Training Area 1	Unknown; currently under study	
Industrial	Landfill Site 3	Cap landfill	Cap design Landfill Site 3 Groundwater is down-gradient for Landfill Site 1, Landfill Site 2, and Fire Training Area 1 (potential remedial design interference)
Aviation Support	Fire Training Area 2	Unknown; currently under study	Groundwater is downgradient from Landfill Site 1, Landfill Site 2 and Fire Training Area 1 (potential remedial design interference)
	Landfill Site 4	Cap landfill	Landfill Site 4 cap
	Tank sludge pit	Excavate pit	Tank sludge pit and two other possible IRP sites (potential remedial design interference)
	Landfill Site 2	Cap landfill	Cap design limitations for Landfill Site 2 Groundwater is down-gradient from Landfill Site 1, Landfill Site 2, and Fire Training Area 1 (potential remedial design interference)

Underground/Above-Ground Storage Tanks. Both above-ground tanks and USTs would be required for air flight and maintenance operations under the Proposed Action. The potential for fuel spills and releases would be addressed by completing a Spill Prevention and Countermeasures Plan. New USTs and

above-ground storage tanks required by the new operators would have to comply with local, state, and federal regulations regarding leak detection, spill and overfill protection, and liability insurance. Above-ground fuel storage tanks that do not support reuse activities will have to be purged to preclude fire hazards, as required by the Illinois Fire Marshall. A small above-ground storage tank would have to be removed from the off-base acquisition area for the aviation support area. The closure of this tank should conform with the applicable Illinois Fire Marshall regulations.

Asbestos. A basewide asbestos survey was completed in December 1990. This survey was designed to identify structures, asbestos found in these structures, and approximate costs associated with asbestos remedial options. A report on this survey is anticipated in 1991. Renovation or demolition of existing structures containing asbestos materials will be conducted in compliance with all other applicable federal, state, or local regulations. For the majority of those structures, implementing effective asbestos management would preclude any problems with friable asbestos exposure.

Pesticides and Herbicides. Pesticide and herbicide usage under the Proposed Action would, at a minimum, continue as currently practiced. At present, the majority of pesticide, herbicide, and fungicide usage at Chanute AFB occurs on the golf course; this usage would continue as a recreational land use under the Proposed Action. Use of additional open spaces and Heritage Park landscaping requirements would lead to use of such chemicals in these areas as well.

Maintenance and agricultural use of the areas adjoining the runways and encompassing the airfield would include applications of pesticides, fungicides, and herbicides. The amount of these substances applied in the residential areas would be proportionate to population increases.

PCBs. Because the PCB-contaminated equipment and/or fluid is to be removed prior to base closure, there will not be any impacts.

Radon. A prior survey noted one residence with detectable radon levels. An additional radon survey to identify any other latent problems is in progress. Currently, no radon exposure guidelines or action levels have been established by regulatory agencies for buildings other than schools or residences.

Medical/Biohazardous Waste. All of these materials are to be rendered non-infectious or removed prior to closure. As a result, these materials will not represent an impact.

Cumulative Impacts. Chapman Court was surveyed for the presence of asbestos containing materials (ACM). It was estimated that 3,325 cubic yards of ACM could be subject to regulations (U.S. Air Force, 1991a). Asbestos removal

resulting from the Proposed Action and disposal of Chapman Court would create cumulative impacts.

Mitigation Measures. A cooperative planning body for hazardous materials and waste could be established with agreement among the individual new users. The establishment of a cooperative planning body could reduce the costs of environmental compliance training, waste management, and mutual spill response.

The Air Force has committed to remediating all IRP sites. Active coordination between the Air Force's IRP representative and new construction planning agencies would mitigate potential problems. The presence of IRP sites may limit certain land uses at these sites.

Coordination of asbestos removal and new construction or renovation actions would mitigate any potential asbestos impacts. Compliance with the NESHPAP would mitigate and preclude asbestos exposure. Potential pesticide, fungicide, and herbicide impacts could be mitigated through compliance with the FIFRA and the Illinois Lawn Care Products Application and Notice Act. Potential residential radon exposure can be mitigated through both management practices and modifications to existing structures.

4.3.2 Minor Aircraft Maintenance Operations Alternative

The Proposed Action and the Minor Aircraft Maintenance Operations Alternative differ primarily in the off-base aviation support area (new maintenance facility); the other eight land use zones are the same. As a result, all of the effects identified in the Proposed Action concerning the IRP program (Figure 4.3-2), UST, asbestos, pesticides and herbicides, and radon would be the same. The amounts of hazardous materials used and of hazardous waste generated would be lower for this alternative than for the Proposed Action, because there would be no major aircraft maintenance activities.

Cumulative Impacts. Asbestos removal resulting from this alternative and disposal of Chapman Court would create cumulative impacts.

Mitigation Measures. The same mitigation measures discussed for the Proposed Action would be appropriate for activities under this alternative.

4.3.3 Non-Aviation Alternative

Hazardous Material Management. The same effects as discussed under the Proposed Action for the similar identified areas apply to this alternative. The absence of aviation traffic and maintenance activities may reduce the amount of hazardous materials managed under this option. Truck maintenance activities

**IRP Sites-
Minor Aircraft
Maintenance
Operations
Alternative**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION



Land Use

- ① Airfield
- ② Aviation Support
- ③ Institutional (Educational/Training)
- ④ Industrial
- ⑤ Institutional (Medical)
- ⑥ Commercial
- ⑦ Public/Recreation
- ⑧ Residential



0 600 1200 2400 Feet

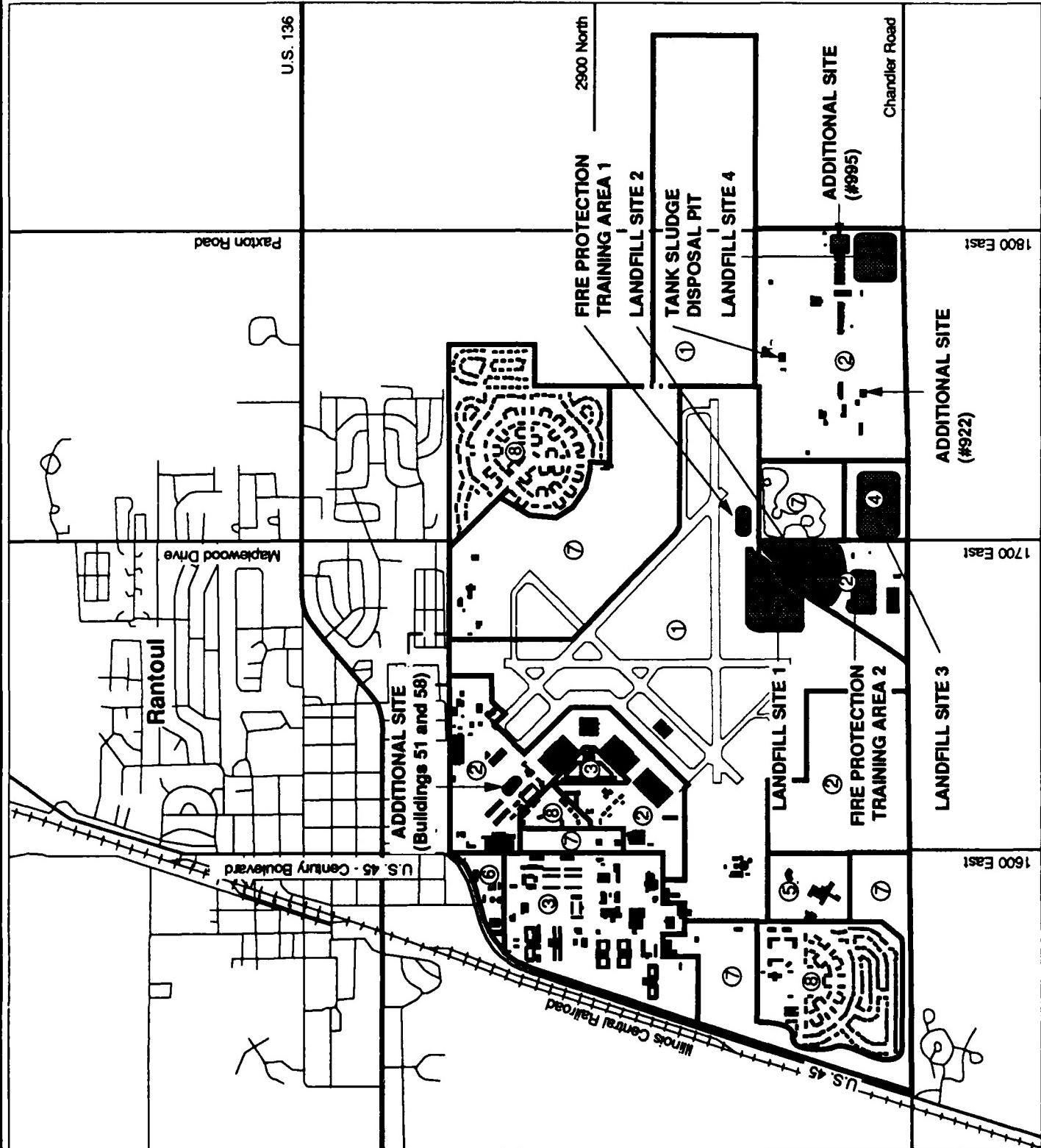


Figure 4.3-2

would use hazardous materials similar to those utilized in current vehicle maintenance training prior to base closure.

Hazardous Waste. The same effects discussed under the Proposed Action would apply to this alternative. The types of waste generated should be similar to those identified for the Proposed Action, but the amounts would be smaller because there would be no aviation maintenance activities. Truck maintenance activities may generate types of hazardous waste similar to those generated by the aviation maintenance activity in the Proposed Action, but in smaller amounts. Various parties would be responsible for managing different waste streams in the identified reuse areas.

Installation Restoration Program. The IRP program and remediation requirements may constrain the land uses identified in this non-aviation alternative (Figure 4.3-3).

The agricultural areas are underlain by Landfill Site 1, Landfill Site 4, and Fire Training Area 1. Remedial cap design limitations and treatment options may preclude agricultural uses on these sites. Institutional (educational) land uses would be underlain by the sludge disposal pit. Remedial designs may limit use of this small site. In addition, the educational land use in the areas occupied by the current Fire Training Area 2 may require a new design and remediation of the current fire training pit.

Portions of the recreational use areas are underlain by Landfill Site 2. This recreational use may partially interfere with the remedial cap design. Extraction wells may be placed in this recreational area to address the treatment requirements for Landfill Site 1, Landfill Site 2, and Fire Training Area 1. Conveyance of portions of the property may be delayed by the Air Force's remedial activities.

Underground/Above-Ground Storage Tanks. USTs required by new owners/operators would have to comply with local, state, and federal regulations regarding leak detection, spill and overfill protection, and liability insurance. Above-ground large fuel storage tanks that do not support reuse activities would have to be purged to preclude fire hazards.

Asbestos. Implementing effective asbestos management would preclude problems with friable asbestos exposure in the existing structures and units scheduled for demolition or renovation.

Pesticides and Herbicides. The agricultural use of several sections of the base would entail the use of pesticides, fungicides, and herbicides. As under the Proposed Action, applicators would be certified and licensed by the state to assure proper and safe handling and application of pesticides and herbicides.

**IRP Sites-
Non-Aviation
Alternative**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION



Land Use

- ① Not Applicable
- ② Not Applicable
- ③ Institutional (Educational/
Training)
- ④ Industrial
- ⑤ Institutional (Medical)
- ⑥ Commercial
- ⑦ Public/Recreation
- ⑧ Residential
- ⑨ Agriculture

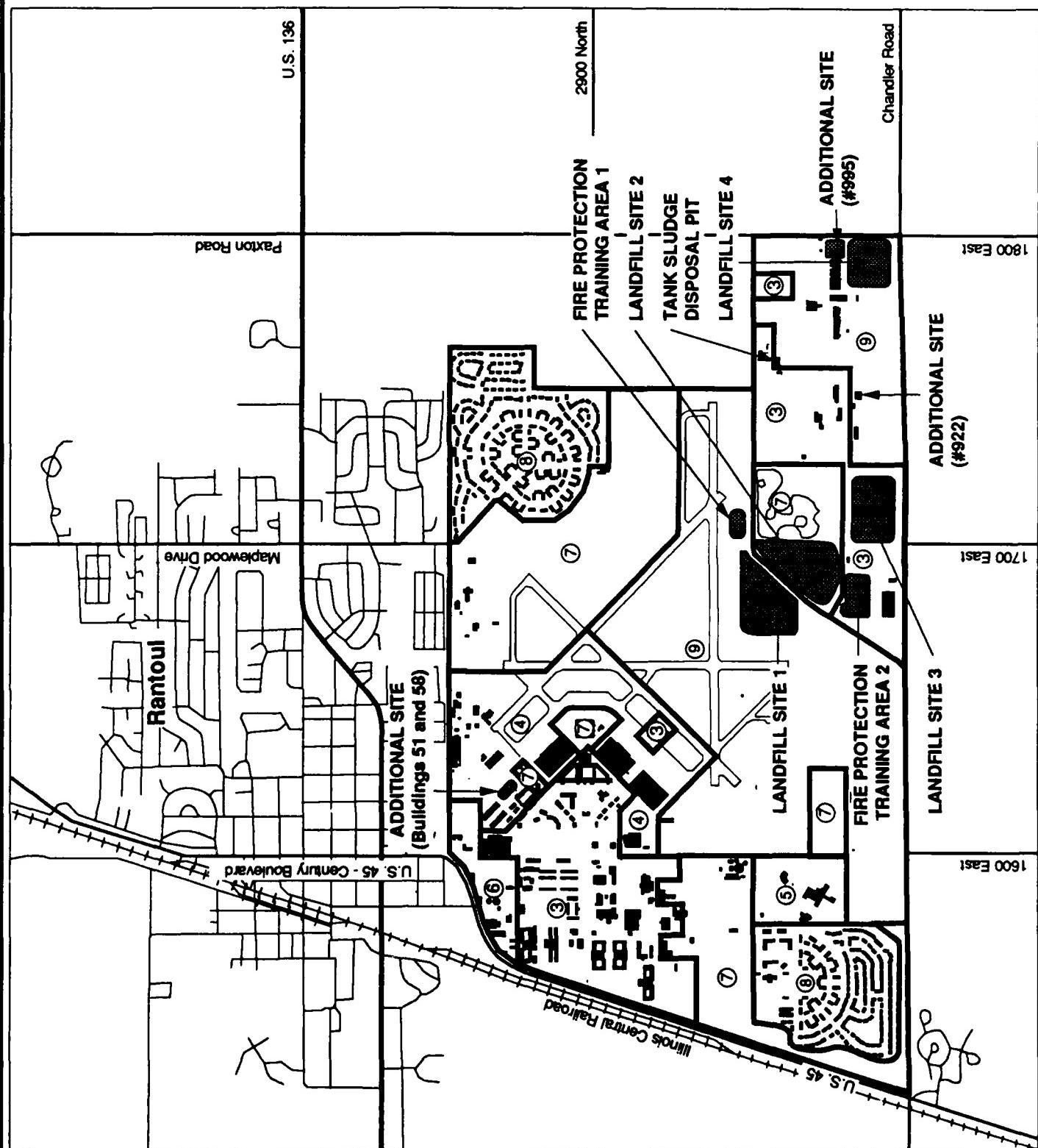
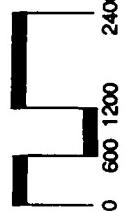


Figure 4.3-3

PCBs. Because the PCB-contaminated equipment and/or fluid is to be removed prior to base closure, there would not be any impacts.

Radon. The majority of the structures that have been tested for radon have concentrations below the minimum levels. Additional information is needed to assess the potential problems that radon may pose regarding residential reuse.

Medical/Biohazardous Waste. All of these materials are to be rendered non-infectious or removed prior to closure. As a result, these materials will not represent an impact.

Cumulative Impacts. Asbestos removal resulting from this alternative and disposal of Chapman Court would create cumulative impacts.

Mitigation Measures. Potential impacts from hazardous materials and waste management could be mitigated by the formation of a cooperative planning and training body that would ensure compliance with OSHA and RCRA regulatory requirements. Cooperative spill response teams could mitigate potential hazardous materials spills. The impacts from the interaction between the IRP program and new construction or uses of these sites could be mitigated by coordination between the reuse tenants and the Air Force's representative.

4.3.4 No-Action Alternative

Hazardous materials and waste issues would be limited to the final phases of the IRP activities. Under the No-Action Alternative, the disposal management team would be required to manage all waste generated under the applicable regulations. Painting and maintenance would be the primary activities that would involve hazardous materials.

Hazardous Materials. Hazardous materials would be utilized in preventive maintenance, maintaining the grounds, water treatment, and regular maintenance activities. The materials used would include pesticides, herbicides, fuels, waste oils, paints, and corrosives. The disposal management team would be responsible for hazardous materials handling training as well as hazard communication requirements under OSHA regulations.

Hazardous Waste. With the exception of facilities used by disposal management team personnel, all of the storage and satellite accumulation areas would be closed before base closure. The DRMO would dispose of all of the waste prior to closure. The small amount of hazardous waste that would be generated may enable the disposal management team to become an exempt, small-quantity generator. All IEPA regulations would apply.

Installation Restoration Programs. The disposal management team would support the utility requirements for the IRP contractor and provide the security

for the areas that would receive closure permits. Ongoing sampling or pump-and-treat remedial designs would probably remain with the current contractor. The IRP activity would proceed along the same management line regardless of the options chosen.

Underground/Above-Ground Storage Tanks. All USTs will be removed before base closure. The risk from unnoticed releases precludes leaving products in the tanks. Leaving the tanks empty would lead to deterioration and degradation; removal is preferred. The above-ground, large fuel storage tanks would be purged to preclude fire hazards. The disposal management team would provide cathodic protection, repair, and maintenance for the above-ground storage tanks and piping.

Asbestos. The impacts from the No-Action Alternative would be minimal. Vacated facilities would likely be boarded up; therefore, asbestos from deteriorated ACM would not be released to the atmosphere.

Pesticides and Herbicides. Under the No-Action Alternative, the grounds and golf course would be maintained in such a manner as to facilitate economical resumption of use. There should not be an appreciable increase in the use of pesticides and herbicides. Application of pesticides and herbicides would be conducted in accordance with the FIFRA and Illinois state regulations to assure the proper and safe handling and application of all chemicals.

PCBs. Because the PCB contaminated equipment and/or fluid is to be removed prior to base closure, there would not be any impacts.

Radon. Without use of the residential buildings or day-care facilities, the exposure to radon is expected to present no impacts.

Medical/Biohazardous Waste. All of these materials are to be rendered non-infectious or removed prior to closure. As a result, these materials will not represent an impact.

Cumulative Impacts. Because there would be no other ongoing project activities, there would be no cumulative impacts.

Mitigation Measures. The caretaker would be responsible for the basewide management of hazardous materials and hazardous waste. Contingency plans to address spill response would be less extensive than those required for the Proposed Action and the alternative plans.

4.4 NATURAL ENVIRONMENT

This section describes the potential effects on the natural resources of geology and soils, water resources, noise, biological resources, and cultural resources in the base area and the surrounding region.

4.4.1 Geology and Soils

This section describes the potential effects of the proposed action and reuse alternatives on the area geology and soils. The analysis is based on the review of published literature. The soils and geology will be affected largely during the construction phase, when local soil profiles are altered and regional aggregate supplies are tapped. After construction, soils will remain relatively stable because they will be overlain by facilities or pavements, or will be managed following SCS recommendations, i.e., providing protective covering by revegetating or by covering with mulch or other material.

4.4.1.1 Proposed Action. Regional effects on geology and soils outside the proposed site area would not be significant. Use of sand and gravel (e.g., for base or drain construction material) from the very large deposits several miles north of Chanute AFB would not significantly reduce the available supply of these materials.

Local effects on geology and soils would result primarily from construction activities associated with the Proposed Action, including the grading, excavation, and recontouring of soils. These activities could alter soil profiles and slightly alter the local topography.

During construction operations, removal of vegetative cover and exposure of cut slopes would increase erosion, especially by water, but also by wind. Because these soils are generally fragile (U.S. Department of Agriculture, 1982), preventative measures would be required to minimize erosion (see Section 3.4.1). Most of the soils that would be affected by construction activities have been disturbed previously. Undisturbed soils that would be affected include those in off-base lands subject to acquisition and in isolated areas in the southeast part of the base. A total of 576 acres of prime farmland will be converted to non-agricultural land uses. Table 4.4-1 lists the acreage of each soil type to be purchased and its farmland status.

Table 4.4-1. Soil Type, Acreage, and Status of Farmland to be Converted Under the Proposed Action

Soil Type	Acreage to be Converted	Farmland Status
Ambraw silty clay loam	6.8	Prime Farmland where drained
Brenton silt loam; 0 to 3% slopes	42.7	Prime Farmland
Dana silt loam; 2 to 5% slopes	48.1	Prime Farmland
Drummer silty clay loam	257.7	Prime Farmland where drained
Odell silt loam; 0 to 3% slopes	8.7	Prime Farmland
Parr silt loam; 2 to 5% slopes	17.3	Prime Farmland
Raub silt loam; 0 to 3% slopes	194.7	Prime Farmland
Total Acreage	576	

Source: U.S. Department of Agriculture, 1982.

Soils in the other land use areas, with the exception of institutional areas, would also be significantly affected by construction operations. The largest affected area would be in the off-base aviation support area, where 2.7 million square feet would be required for foundation excavations for new facilities and additional area associated with construction activities for related parking spaces, roads, and utilities. The next largest affected soil area would be in the commercial land use area, where approximately 400,000 square feet could be disturbed to provide foundation excavations and parking space.

Soils in the airfield area would be significantly affected by construction activities, especially in the acquired areas. Grading would be required for new runways, taxiways, parking aprons, and bordering areas to ensure that effective drainage is provided and that the transition in grades is smooth enough for aircraft operations. Much of the surface soil would therefore be removed and replaced with materials (e.g., sand and gravel) that provide improved base support and drainage characteristics.

Portions of on-base land would be leased for farming under the Proposed Action. Of the 300 acres currently leased, which includes land in the runway area and in the southwest corner of the base, some would continue to be leased for farming and the rest would be used for airfield and aviation support activities.

Cumulative Impacts. No cumulative effects on soils or geological resources from other projects are anticipated.

Mitigation Measures. Comprehensive mitigation measures would have to be implemented to minimize soil erosion by water, especially during the construction phases when cut slopes are exposed. During construction, the length of time that vegetative or other cover is absent would be minimized. When cut slopes are exposed, any of the following measures may be useful in limiting erosion:

- Protective covering with mulch or other material
- Diversion dikes
- Interceptor ditches
- Slope drains (conduits)
- Water velocity control devices.

After the construction phase, erosion would be controlled by keeping soils under vegetative cover, facilities, or pavements, or managing soils in accordance with SCS recommendations. In addition, aviation development would follow the provisions of FAA circular 150/5370.10 (Federal Aviation Administration, 1990).

4.4.1.2 Minor Aircraft Maintenance Operations Alternative. Impacts would be identical to those for the Proposed Action, with the exception of those related to the off-base aviation support area, which is not included in this alternative.

Acquiring the off-base area for airfield expansion will result in conversion of 231 acres of prime farmland to non-agricultural land uses. Table 4.4-2 summarizes the acreage of each soil type to be converted and its farmland status.

Table 4.4-2. Soil Type, Acreage, and Status of Farmland to be Converted Under the Minor Aircraft Maintenance Operations Alternative

Soil Type	Acreage to be Converted	Farmland Status
Ambray silty clay loam	6.8	Prime Farmland where drained
Brenton silt loam; 0 to 3% slopes	25.4	Prime Farmland
Dana silt loam; 2 to 5% slopes	33.8	Prime Farmland
Drummer silty clay loam	82.7	Prime Farmland where drained
Parr silt loam; 2 to 5% slopes	17.3	Prime Farmland
Raub silt loam; 0 to 3% slopes	65.0	Prime Farmland
Total Acreage	231	

Source: U.S. Department of Agriculture, 1982.

Cumulative Impacts. No cumulative effects on soils or geological resources from other projects are anticipated.

Mitigation Measures. Potential mitigation measures would be similar to those discussed for the Proposed Action.

4.4.1.3 Non-Aviation Alternative. Impacts would be similar to those for the Proposed Action, with the exception of the impacts related to the off-base aviation support area, which is not included in this alternative. Under this alternative, the existing airfield would not be demolished; therefore, no impacts to soils or geology would be incurred there. However, agricultural land uses in the open areas adjacent to the existing runway would have to be managed with SCS recommended practices.

Cumulative Impacts. No other projects are anticipated to create cumulative impacts.

Mitigation Measures. Potential mitigation measures would be similar to those discussed for the Proposed Action.

4.4.1.4 No-Action Alternative. The No-Action Alternative would result in no major new impacts to the soils and geology of the base area and the surrounding region. The construction operations associated with this alternative would be minimal and restricted to maintenance-type activities. Land in the runway area and in the southwest corner of the base would continue to be leased for farming.

4.4.2 Water Resources

The following sections describe the potential impacts on water resources from the Proposed Actions and reuse alternatives. The recreational lake, golf course ponds, and water-saturated areas will not be affected under any alternative. The soil profiles would be altered during construction, which may alter water flow patterns temporarily.

4.4.2.1 Proposed Action. With further development of the Kansan aquifer, sufficient quantities of water are available for a two-fold increase in the area's population. The quality of the surface and groundwater is not expected to change substantially. The Governor of Illinois has provided a letter (Appendix E) indicating that the project will be located, designed, constructed, and operated in compliance with applicable water quality standards.

The northernmost section of Salt Fork Creek, in the off-base area to be acquired, flows through the runway protection zone associated with the proposed east-west runway extension. The detailed airport design is not expected to require modification of the creek or lands near the creek in this area.

Soils in the airfield area will be compacted during construction operations to give the soil more uniform, predictable engineering characteristics. Additionally, soil bulk densities will increase with the handling and consequent settling and fragmentation of natural aggregates. As a result, surface water and near-surface groundwater flow would be significantly affected in the airfield area. Flow would be affected by grading, subgrade compaction, and substitution of improved drainage/support materials (e.g., sand and gravel, or crushed rock) for upper soil layers. Drainage patterns would be altered to divert water away from critical areas on or near the runway. The acquired area would be most affected by these types of construction activities. Stormwater discharge (non-point source) from the airfield may contain deicing solutions and waste oils, which could degrade surface water and groundwater.

Surface water and near-surface groundwater flow would also be affected in other land use areas. As with the soils impacts, the largest area affected would be in the acquired aviation support area. The significant increase in covered or compacted soil areas would increase surface runoff. Grading and altering of soil profiles, e.g., with substitution of improved drainage materials, would affect patterns of surface water and near-surface groundwater flow. Ponding may occur in new areas, because the high water table, low permeability, and limited hydraulic gradient make the site very sensitive to changes in water flow patterns. Construction activities in agricultural areas on and off base could potentially damage subsurface tile drainage systems. Damage to these systems could result in upstream ponding in fields and decreases in crop yield to owners of adjacent agricultural land.

Cumulative Impacts. No other projects are anticipated to create cumulative impacts.

Mitigation Measures. To minimize ponding in new areas, construction designs for the site would require consideration of impacts on adjacent areas. Before construction design, a MUDS-type study will be completed to identify potential water drainage problems. Any required mitigation measures would be incorporated into the design and construction of new facilities. These designs would also include measures to assure proper subsurface tile drainage for adjacent farmlands in the areas to be acquired. The project would be subject to the NPDES permit system for storm water discharges during the construction period and for the airfield. This provision is contained in the NPDES Permit Application Regulations for Storm Water Discharges issued by the EPA as final rule on 16 November 1990. This permit is required for all construction activities that would disturb more than 5 acres and for major transportation facilities that have vehicle maintenance areas, equipment cleaning areas, and airports with deicing areas.

4.4.2.2 Minor Aircraft Maintenance Operations Alternative. The quantity of groundwater extracted under this alternative would be less than that required for the Proposed Action and, thus, would not create any adverse affects. Effects are expected to be identical to those for the Proposed Action, with the exception of effects related to the off-base aviation support area, which would not be acquired under this alternative.

Cumulative Impacts. No other projects are anticipated to create cumulative impacts.

Mitigation Measures. The same mitigation measures as discussed for the Proposed Action would be applicable for this alternative.

4.4.2.3 Non-Aviation Alternative. Under this alternative, the estimated area population is considered to be lower than that for the previous aviation-related alternatives, thus reducing the amount of groundwater being withdrawn. Effects associated with this alternative would be positive changes in surface and groundwater quality. With reduced operations, the inflow of new hazardous materials would be reduced and the reduced volumes of wastewater generated should result in lower fecal coliform counts in Salt Fork Creek.

Effects to surface water and near-surface ground water flows are expected to be reduced compared to those of the Proposed Action because there will be little construction, demolition, and renovation. In addition, the existing runways would remain intact and, therefore, there would be no change in existing drainage patterns.

Cumulative Impacts. No other projects are anticipated to create cumulative impacts to water resources.

Mitigation Measures. Mitigation measures are not necessary because no impacts are anticipated.

4.4.2.4 No-Action Alternative. This alternative would result in positive changes in surface and groundwater quality. With very limited operations, inflow of new hazardous materials would be reduced. The fecal coliform count in Salt Fork Creek should drop because of the reduced volumes of wastewater leaking into the stormwater drainage system.

Cumulative Impacts. No other projects are anticipated to create cumulative impacts to water resources.

Mitigation Measures. Mitigation measures are not necessary because no impacts are anticipated.

4.4.3 Air Quality

Air quality impacts could occur during construction and operations associated with the Proposed Action and alternatives at Chanute AFB. Construction-related impacts could result from fugitive dust (particulate matter) and construction equipment emissions intermittently over a period of 20 years or more. Operational impacts could occur from: (1) mobile sources such as aircraft, aircraft operation support equipment, commercial transport vehicles, and personnel vehicles; (2) point sources such as heating plants, generators, incinerators, and storage tanks; and (3) secondary emission sources associated with general population increase, such as residential heating. Under FAA guidelines, an air quality analysis of these potential impacts is required only if the Proposed Action were going to be (1) a commercial service airport with more than 1.3 million passengers and more than 180,000 general operations forecast annually, or (2) a general aviation airport with more than 180,000 operations forecast annually. Nonetheless, the following analysis is provided for informational purposes and to satisfy the requirements of NEPA. The methods and assumptions used in the air quality analysis to determine project compliance with existing regulations are described in the following sections.

The methods selected to analyze impacts depend upon the type of air emission source being examined. The primary emission source categories associated with the Proposed Action and the alternatives include construction, aircraft, vehicles, point sources, and indirect source emissions related to population increase. Because construction phase emissions are generally considered temporary and not subject to air quality regulation, analysis is limited to estimating the amount of uncontrolled fugitive dust that may be emitted from disturbed areas. Analysis for vehicle, point source, and indirect source

emissions consists of quantifying and comparing the emissions under preclosure and closure conditions to the emissions generated by the proposed or alternative actions. The amount of change is used to estimate the potential effect on air quality. The ambient effects of aircraft emissions are analyzed by modeling, because this category represents a new source of emissions in the Chanute AFB area. The Industrial Source Complex Short-Term (ISCST) model is used to simulate the dispersion of emissions from aircraft and aircraft operation equipment within the hangar, taxiway, and runway airspaces (U.S. Environmental Protection Agency, 1987).

The following assumptions were made in estimating the effects of the Proposed Action and alternatives:

- The future base emission inventory is assumed to be equivalent to the preclosure base inventory multiplied by the ratio of the future base population to the preclosure base population (with the exception of aircraft emissions and aircraft support operation emissions, which are calculated and added in separately)
- Emissions from equipment used to support aircraft operations are assumed to be equivalent to the support operation emissions from an existing airfield multiplied by the ratio of the Proposed Action landing and take-off (LTO) cycles to the number of LTO cycles at the existing airfield
- Ambient air quality background in the Chanute AFB area is assumed to be represented by air quality data measured in the more heavily populated Champaign area.

4.4.3.1 Proposed Action. The effects of the Proposed Action on regional and local air quality are not expected to result in the violation of any NAAQS or IAAQS. The Governor of Illinois has provided a letter (Appendix E) indicating that the project will be located, designed, constructed, and operated in compliance with applicable air quality standards.

Estimated emissions of the Proposed Action are presented in Table 4.4-3. The estimates of aircraft emissions are based on EPA aircraft emission factors (U.S. Environmental Protection Agency, 1985b).

Construction. Fugitive dust and combustive emissions would be generated during construction activities associated with airfield, aviation support, industrial, and commercial land uses. These emissions would be greatest during site clearing and grading activities. Uncontrolled fugitive dust (particulate matter) from ground-disturbing activities would be emitted at a rate of approximately 1.2 tons/acre-month (U.S. Environmental Protection Agency, 1985a). The PM₁₀ fraction of the total fugitive dust emissions is assumed to be 50 percent, or 0.6 ton/acre-month.

Construction of runway extensions and resurfacing of the existing runways would peak in 1992. Demolition and renovation of buildings in the aviation support and commercial land use areas is anticipated to occur sporadically as

**Table 4.4-3. Proposed Action Emission Inventory for Chanute AFB and Champaign County
(Tons/Year)**

Source Category	CO	THC	NO _x	SO ₂	PM
Chanute AFB^(a)					
Incinerators	—	—	0.01	—	0.02
Fire School practice burns	394.0	282.5	2.9	0.2	90.9
Emergency generators	24.0	1.5	0.5	0.05	0.03
Natural gas-fired heating plant	7.3	0.3	1.8	0.03	0.2
Coal-fired heating plant	115.1	2.0	143.8	748.1	460.4
Natural gas-fired heaters	3.9	1.5	19.4	0.1	0.9
Fuel oil-fired heaters	0.7	0.3	2.5	20.3	0.3
Surface coatings	—	163.8	—	—	—
Aerospace ground equipment	1.6	1.3	0.1	0.01	0.1
Fuel storage and transfer	—	18.6	—	—	—
Personal vehicles	730.3	81.6	73.0	11.8	30.0
Wood dust	—	—	—	—	4.2
Aircraft ^(b)	296.6	60.6	69.3	7.2	1.0
Aircraft ground operations	2.7	1.2	3.3	0.3	0.2
Subtotal	1,576.2	615.2	316.6	788.1	588.3
Champaign County^(c)					
Personal vehicles	407.8	2,281.7	2,682.2	4,590.4	1,724.0
Total Champaign County	12,270.3	4,045.7	4,027.3	5,544.4	2,735.4

(a). With the exception of aircraft and aircraft ground operations, emissions are based on data from Table 3.4-3 times the ratio of year 2014 Proposed Action base population to year 1988 base population.

(b). Emissions are based on projected types of aircraft and estimated frequency of flight operations for each type of aircraft in year 2014. See Appendix I for detailed calculations.

(c). Emissions are based on data from Table 3.4-3 times the ratio of year 2014 county population to year 1988 county population.

needed through the year 2014. Construction of a new baffled firing range in the industrial land use area could be completed within 10 years of closure. It is estimated that the maximum amount of land area that would be disturbed at any one time as a result of these construction activities is 25 acres. The maximum unmitigated amount of particulate matter emissions would therefore be 30 tons per month (15 tons per month of PM₁₀). The impact of these emissions would cause elevated short-term concentrations of particulates at receptors close to the construction area. However, the elevated concentrations would be a temporary effect that would fall off rapidly with distance from the construction area.

Operation. Estimated annual emissions from vehicle, point, and indirect sources associated with the Proposed Action were added to Champaign County emissions, as shown in Table 4.4-3 for the year 2014. That year represents full

implementation of the Proposed Action and maximum emissions. These emissions are compared to preclosure and closure annual emissions in Table 4.4-4 to determine the potential change in air quality. The Proposed Action would increase the total county emission inventory by 12 to 28 percent over the amount of emissions that would occur under closure conditions in 1993. However, these emissions would represent an increase of only over 6 to 8 percent over the inventory that existed during preclosure conditions in 1988. The good background air quality conditions of 1988 would therefore be degraded only slightly by the Proposed Action.

Table 4.4-4. Comparison of Proposed Action Emissions to Preclosure and Closure Emission Inventories for Champaign County

Pollutant	Emissions (tons/year)		Proposed Action (tons/year)	Percent Change	
	Preclosure	Closure		Preclosure	Closure
CO	11,387	10,307	12,270	7.8	19.0
THC	3,777	3,299	4,046	7.1	22.6
NO _x	3,778	3,596	4,027	6.6	12.0
SO ₂	5,247	4,705	5,544	5.7	17.8
PM	2,575	2,144	2,735	6.2	27.6

Emissions from aviation activities associated with the reuse of Chanute AFB are based on the types of aircraft in operation, the annual number of aircraft LTO cycles, and aircraft maintenance and ground operation activities. Annual aircraft operations associated with the Proposed Action aircraft maintenance and air cargo uses are shown in Table 2.2-2. Aircraft emission calculations are in Appendix I.

The results of the impact analysis show that for a worst-case aircraft operation scenario in the year 2014, the following maximum 1-hour ambient pollutant concentrations would be produced at receptors located along the northern and eastern boundaries of the base property: 1,159 $\mu\text{g}/\text{m}^3$ of CO, 415 $\mu\text{g}/\text{m}^3$ of THC, 131 $\mu\text{g}/\text{m}^3$ of NO₂, 21 $\mu\text{g}/\text{m}^3$ of SO₂, 4.2 $\mu\text{g}/\text{m}^3$ of TSP, and 2.1 $\mu\text{g}/\text{m}^3$ of PM₁₀. EPA conversion factors are used to convert the 1-hour impacts to conservative screening-level estimates of longer averaging period concentrations (U.S. Environmental Protection Agency, 1977). The actual long-term average would be lower than the values produced by the conversion factor. However, even with the addition of background pollutant levels to these estimated project impacts, the total impacts would remain below the NAAQS and IAAQS. Because the year 2014 presents the worst-case scenario in terms of number of annual aircraft operations and maximum number of takeoffs per hour, effects in other years of the Proposed Action would be lower. A summary of the impact analysis is presented in Table 4.4-5. Detailed calculations used for the model runs are contained in Appendix I.

Table 4.4-5. Air Quality Modeling Results for the Proposed Action

Pollutant	Averaging Time	Project Impact ($\mu\text{g}/\text{m}^3$)	Background Concentration(a) ($\mu\text{g}/\text{m}^3$)	Total Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS(b) ($\mu\text{g}/\text{m}^3$)	Percent of NAAQS
CO	8-hour	812	5,000	5,812	10,000	58.2
	1-hour	1,159	20,000	21,159	40,000	52.9
NO ₂	Annual	13	50	63	100	63.0
SO ₂	Annual	2	12	14	80	17.5
	24-hour	8	74	82	365	22.5
	3-hour	19	167	186	1,300	14.3
PM ₁₀	Annual	0.2	26	26.2	50	52.4
	24-hour	0.8	78	78.8	150	52.5

- (a). SO₂ and PM₁₀ background concentrations obtained from pollutant data monitored at the IEPA station in Champaign, Illinois (see Table 3.4-2). Conversion from ppm to $\mu\text{g}/\text{m}^3$ based on standard conditions of 70 deg. F and 14.7psi absolute. Because Champaign County is a clean air area for CO and NO₂, these pollutants are not monitored within the county. Conservative background concentrations equal to 50 percent of the NAAQS were therefore assumed. Actual background concentrations would most likely be lower.
- (b). The IAAQS used to regulate air quality impacts in Illinois are equivalent to the NAAQS.

The analysis described above determined that 1-hour concentrations of O₃ precursors (photochemically reactive compounds, which are NO₂ and approximately 95 percent of the THC) would increase somewhat as a result of project sources. However, even under favorable conditions, several hours are required to convert O₃ precursors to O₃ in the atmosphere. Therefore, given this extended residence time requirement in the atmosphere, project emissions of O₃ precursors would tend to be well dispersed and would not be expected to substantially contribute to an increase in ambient concentrations of O₃. Champaign County is currently in attainment of the O₃ standards, and emissions from the Proposed Action would not be sufficient to cause a change in this status.

Cumulative Impact. The only other project currently planned for the Chanute AFB area that would have a potential cumulative air quality impact with the Proposed Action is the disposal and reuse of the Chapman Court Military Family Housing Area. Air quality impacts from this project would primarily result from the release of particulate matter during the demolition, site preparation, and construction phases of the action. Some operational impacts would also result from emissions from mobile sources, commercial transport vehicles, and personnel vehicles. However, these impacts would be minimal, similar to those in existing residential and commercial areas. Because construction of the Chapman Court project would probably be phased, the cumulative impact of

emissions from the project with emissions from the Proposed Action would not be sufficient to cause a change in the attainment status of the area.

Mitigation Measures. Air quality impacts during construction would occur from (1) fugitive dust emissions from ground-disturbing activities and (2) combustive emissions from construction equipment. Vigorous water application during ground-disturbing activities would mitigate fugitive dust emissions by at least 50 percent (U.S. Environmental Protection Agency, 1985a). Decreasing the time during which newly graded sites are exposed to the elements would further mitigate fugitive dust emissions. Combustive emission impacts could be mitigated by efficient scheduling and use of equipment, implementing a phased construction schedule to reduce the number of units operating simultaneously, and performing regular vehicle engine maintenance. Implementation of these measures would substantially reduce air quality effects from construction activities associated with the Proposed Action. In addition, all aviation development would follow the provisions of FAA Advisory Circular 150/5370.10 (Federal Aviation Administration, 1990).

No major impacts on air quality would occur as a result of operations associated with the Proposed Action. Air quality operational mitigation measures are therefore not necessary.

4.4.3.2 Minor Aircraft Maintenance Operations Alternative. The only difference between this alternative and the Proposed Action is the size of the aircraft maintenance operations. The reduced size of the aircraft maintenance operations would result in fewer aircraft and population-related air quality effects.

Construction. Construction effects from this alternative would be lower than those from the Proposed Action. Under this alternative, off-base property would not be acquired for the aviation support land use area. It is therefore estimated that a maximum of 20 acres would be disturbed at any one time as a result of construction activities, producing unmitigated particulate matter emissions of approximately 24 tons per month (12 tons per month of PM₁₀). The impact of these emissions would cause elevated short-term concentrations of particulates at receptors close to the construction areas. However, the elevated concentrations would be a temporary effect that would fall off rapidly with distance from the construction area.

Operation. Base emissions associated with this alternative would be reduced somewhat from the emissions shown in Table 4.4-3 for the Proposed Action because of the reduction in air traffic and population. Emissions from this alternative are presented in Table 4.4-6 for the year 2014.

Table 4.4-6. Minor Aircraft Maintenance Operations Alternative Emission Inventory for Chanute AFB and Champaign County (Tons/Year)

Source Category	CO	THC	NO _x	SO ₂	PM ₁₀
Chanute AFB^(a)					
Incinerators	—	—	0.01	—	0.01
Fire School practice burns	244.4	175.2	1.8	0.1	56.4
Emergency generators	14.9	0.9	0.3	0.03	0.02
Natural gas-fired heating plant	4.5	0.2	1.1	0.02	0.1
Coal-fired heating plant	71.4	1.2	89.2	464.1	285.6
Natural gas-fired heaters	2.4	0.9	12.0	0.1	0.6
Fuel oil-fired heaters	0.4	0.2	1.6	12.6	0.2
Surface coatings	—	101.6	—	—	—
Aerospace ground equipment	1.0	0.8	0.1	0.01	0.1
Fuel storage and transfer	—	11.5	—	—	—
Personal vehicles	453.1	50.6	45.3	7.3	18.6
Wood dust	—	—	—	—	2.6
Aircraft ^(b)	240.5	41.4	39.2	4.3	0.34
Aircraft ground operations	2.4	1.1	3.1	0.3	0.2
Subtotal	1,035.0	385.6	193.7	488.9	364.8
Champaign County^(c)					
Personal vehicles	407.8	2,281.7	2,682.2	4,590.4	1,724.0
Total Champaign County	11,729.1	3,816.1	3,904.4	5,245.2	2,511.9

(a) With the exception of aircraft and aircraft ground operations, emissions are based on data from Table 3.4-3 times the ratio of year 2014 MAMO alternative base population to year 1988 base population.

(b) Emissions are based on projected types of aircraft and estimated frequency of flight operations for each type of aircraft in year 2014. See Appendix I for detailed calculations.

(c) Emissions are based on data from Table 3.4-3 times the ratio of year 2014 county population to year 1988 county population.

These emissions are compared to the preclosure and closure emissions in Table 4.4-7 to determine the potential change in air quality. Emissions associated with this alternative would increase the county emission inventory by 9 to 17 percent over the amounts that would occur under base closure conditions in 1993. The increases would be approximately 3 percent over the preclosure conditions that existed in 1988. In fact, emissions of particulate matter could be even lower than during preclosure conditions. The good air quality background conditions of 1988 would therefore be degraded only slightly by emission of pollutants other than PM₁₀ from this alternative.

Table 4.4-7. Comparison of Minor Aircraft Maintenance Operations Emissions to Preclosure and Closure Emission Inventories for Champaign County

Pollutant	Emissions (tons/year)		Alternative (tons/year)	Percent Changes	
	Preclosure	Closure		Preclosure	Closure
CO	11,387	10,307	11,729	3.0	13.8
THC	3,777	3,299	3,816	1.0	15.7
NO _x	3,778	3,596	3,904	3.3	8.6
SO ₂	5,247	4,705	5,245	0.0	11.5
PM	2,575	2,144	2,512	-2.4	17.2

Air quality effects from aircraft and aircraft-related operations associated with this alternative were assessed by use of the ISCST model. The results of the modeling analysis indicate that the following worst-case 1-hour ambient pollutant concentrations would be produced in the year 2014 at receptors located along the northern and eastern boundaries of the base property: 991 $\mu\text{g}/\text{m}^3$ of CO, 372 $\mu\text{g}/\text{m}^3$ of THC, 109 $\mu\text{g}/\text{m}^3$ of NO₂, 16 $\mu\text{g}/\text{m}^3$ of SO₂, 2.2 $\mu\text{g}/\text{m}^3$ of TSP, and 1.1 $\mu\text{g}/\text{m}^3$ of PM₁₀. EPA conversion factors are used to convert the 1-hour impacts to conservative screening-level estimates of longer averaging period concentrations (U.S. Environmental Protection Agency, 1977).

Even with the addition of background pollutant levels to the estimated project impacts, the total impacts would remain below the NAAQS and IAAQS. The year 2014 represents the worst-case scenario in terms of number of annual aircraft operations and maximum number of takeoffs per hour; effects in other years of this alternative would be lower. A summary of the impact analysis is presented in Table 4.4-8. Detailed calculations used for the model runs are contained in Appendix I.

Cumulative Impact. The only other project currently planned for the Chanute AFB area that would have a potential cumulative air quality impact with the Minor Aircraft Maintenance Operations Alternative is the disposal and reuse of the Chapman Court Military Family Housing Area. Cumulative air quality impacts would be similar to those described for the Proposed Action.

Mitigation Measures. Mitigation measures that could be applied during construction to reduce fugitive dust and combustive emissions are the same as those previously recommended for the Proposed Action. No major impacts on air quality would occur as a result of operation of the minor maintenance alternative. Air quality operational mitigation measures are, therefore, not necessary.

4.4.3.3 Non-Aviation Alternative. This alternative includes only non-aviation land uses. There would be no emissions associated with aircraft-related ground or aircraft operations. There would be less construction activity than for the

Table 4.4-8. Air Quality Modeling Results for the Minor Aircraft Maintenance Operations Alternative at Chanute AFB

Pollutant	Averaging Time	Project Impact ($\mu\text{g}/\text{m}^3$)	Background Concentration ^(a) ($\mu\text{g}/\text{m}^3$)	Total Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ^(b) ($\mu\text{g}/\text{m}^3$)	Percent of NAAQS
CO	8-hour	694	5,000	5,694	10,000	56.9
	1-hour	991	20,000	20,991	40,000	52.5
NO ₂	Annual	11	50	61	100	61.0
SO ₂	Annual	2	12	14	80	17.5
	24-hour	6	74	80	365	21.9
	3-hour	14	167	181	1,300	13.9
PM ₁₀	Annual	0.1	26	26.1	50	52.2
	24-hour	0.4	78	78.4	150	52.3

(a). SO₂ and PM₁₀ background concentrations obtained from pollutant data monitored at the IEPA station in Champaign, Illinois (see Table 3.4-2). Conversion from ppm to $\mu\text{g}/\text{m}^3$ based on standard conditions of 70 °F and 14.7psi absolute. Because Champaign County is a clean air area for CO and NO₂, these pollutants are not monitored within the county. Conservative background concentrations equal to 50 percent of the NAAQS were therefore assumed. Actual background concentrations would most likely be lower.

(b). The IAAQS used to regulate air quality impacts in Illinois are equivalent to the NAAQS.

previous two alternatives, because there would be no extension or resurfacing of runways and no new construction of aviation support facilities.

Construction. Air quality impacts related to construction for the Non-Aviation Alternative would be lower than those from the Proposed Action. The reduced amount of construction in the airfield and aviation support land use areas would reduce the overall construction requirements. Demolition and renovation activities would occur on an intermittent basis in the education/training, industrial, and public/recreation land use areas beyond the year 2014. It is estimated that a maximum of 10 acres would be disturbed at any one time by these construction activities, resulting in unmitigated particulate matter emissions of approximately 12 tons per month (6 tons per month of PM₁₀). The impact of these emissions would cause elevated short-term concentrations of particulates at receptors close to the construction areas. However, the elevated concentrations would be a temporary effect that would fall off rapidly with distance from the construction area.

Operations. Base emissions associated with the Non-Aviation Alternative would be lower than the emissions shown in Table 4.4-3 for the Proposed Action because of the reduction in population and the elimination of the aircraft-related emissions. Emissions from the Non-Aviation Alternative are presented in Table 4.4-9. These emissions are compared to the preclosure and closure emissions in Table 4.4-10 to determine the potential change in air quality.

**Table 4.4-9. Non-Aviation Alternative Emission Inventory for Chanute AFB and Champaign County
(Tons/Year)**

Source Category	CO	THC	NO _x	SO ₂	PM
Chanute AFB^(a)					
Incinerators	—	—	0.00	—	0.01
Fire School practice burns	142.5	102.2	1.0	0.08	32.9
Emergency generators	8.7	0.5	0.2	0.02	0.01
Natural gas-fired heating plant	2.6	0.1	0.7	0.01	0.08
Coal-fired heating plant	41.6	0.7	52.0	270.5	166.5
Natural gas-fired heaters	1.4	0.5	7.0	0.04	0.3
Fuel oil-fired heaters	0.3	0.1	0.9	7.4	0.1
Surface coatings	—	59.2	—	—	—
Aerospace ground equipment	0.6	0.5	0.04	0.00	0.04
Fuel storage and transfer	—	6.7	—	—	—
Personal vehicles	264.1	29.5	26.4	4.3	10.9
Wood dust	—	—	—	—	1.5
Subtotal	461.8	200.0	88.2	282.4	212.3
Champaign County^(b)					
Personal vehicles	407.8	2,281.7	2,682.2	4,590.4	1,724.0
Total Champaign County	10,286.3	1,148.8	1,028.5	165.9	423.1
Total Champaign County	11,155.9	3,630.5	3,798.9	5,038.7	2,359.4

(a). Emissions are based on data from Table 3.4-3 times the ratio of year 2014 Non-Aviation Alternative base population to year 1988 base population.

(b). Emissions are based on data from Table 3.4-3 times the ratio of year 2014 county population to year 1988 county population.

Table 4.4-10. Comparison of Non-Aviation Alternative Emissions to Preclosure and Closure Emission Inventories for Champaign County

Pollutant	Emissions (tons/year)		Alternative (tons/year)	Percent Change	
	Preclosure	Closure		Preclosure	Closure
CO	11,387	10,307	11,156	-2.0	8.2
THC	3,777	3,299	3,631	-3.9	10.1
NO _x	3,778	3,596	3,799	-0.6	5.6
SO ₂	5,247	4,705	5,039	-4.0	7.1
PM	2,575	2,144	2,359	-8.4	10.0

Emissions associated with the Non-Aviation Alternative would increase the county emission inventory by 6 to 10 percent over the amounts that would occur under base closure conditions in 1993. However, emissions of all pollutants would decrease when compared to preclosure conditions. The good air quality background conditions that existed in 1998 would therefore not be degraded by the Non-Aviation Alternative activities.

Cumulative Impact. The only other project currently planned for the Chanute AFB area that would have a potential cumulative air quality impact with the Non-Aviation Alternative is the disposal and reuse of the Chapman Court Military Family Housing Area. Cumulative air quality impacts would be similar to those described for the Proposed Action.

Mitigation Measures. Mitigation measures that could be applied during construction to reduce fugitive dust and combustive emissions are the same as those previously recommended for the Proposed Action and the Minor Aircraft Maintenance Operation Alternative. Air quality effects from construction activities associated with the Non-Aviation Alternative would be reduced substantially with the implementation of these measures.

No significant impacts on air quality would occur as a result of operation of the Non-Aviation Alternative. Air quality operational mitigation measures are therefore not necessary.

4.4.3.4. No-Action Alternative. The No-Action Alternative would result in no further use of the base after closure. The Air Force would place the base in a caretaker status intended to limit deterioration of the existing facilities, but there would be no active uses of the property.

The No-Action Alternative would have no adverse effects on air quality. Air quality conditions at the time of closure would not be degraded by continued maintenance of the base at the closure level of activity. In fact, there would be some level of air quality benefit associated with maintaining the base at a reduced level of activity compared to the levels of activity associated with the Proposed Action or other alternative uses.

Cumulative Impacts. Because the No-Action Alternative would have no adverse effects on air quality, there would be no adverse cumulative air quality impacts with any other project.

Mitigation Measures. Air quality mitigation measures are not required for the No-Action Alternative because there are no adverse effects associated with this alternative.

4.4.4 Noise

Environmental impact analysis related to noise includes the potential effects on the local human and animal populations. Impact analysis for noise will estimate the extent and magnitude of noise levels generated by the Proposed Action and alternatives using the predictive models discussed below. The FAA requires the use of the DNL noise metric to analyze cumulative noise impacts for civil airport development actions. The baseline noise conditions and predicted noise levels will then be assessed with respect to potential annoyance, speech interference, sleep disturbance, hearing loss, health, and land use impacts.

Although the FAA does not require analysis of speech, sleep disturbance, hearing loss, animals, and health, these issues have been evaluated. Methods quantifying the effects of noise such as annoyance, speech interference, sleep disturbance, and health and hearing loss have undergone extensive scientific development during the past several decades. The most reliable measures at present are noise-induced hearing loss and annoyance. Extra-auditory effects (those not directly related to hearing capability) are also important, although they are not as well understood. The current scientific consensus is that "evidence from available research reports is suggestive, but it does not provide definitive answers to the question of health effects, other than to the auditory system, of long-term exposure to noise" (National Academy of Sciences, 1981). The effects of noise are summarized here and a more detailed description is provided in Appendix H.

Annoyance. Noise annoyance is defined by the EPA as any negative subjective reaction to noise on the part of an individual or group. Table 4.4-11 presents the results of over a dozen studies for transportation modes, including airports in which the relationship between noise levels and annoyance levels was investigated. This relationship has been recognized by the National Academy of Sciences (1977) for use in describing peoples' reaction to semi-continuous (transportation) noise. A recent reevaluation of the data (Fidell, et al., 1988) has substantially confirmed the relationship. These data are shown to provide a perspective on the level of annoyance that might be anticipated. For example, 15 to 25 percent of persons exposed to DNL of 65 to 70 dB would be highly annoyed by the noise levels.

Speech Interference. One of the ways that noise affects daily life is by preventing or impairing speech communication. In a noisy environment, understanding of speech is diminished when speech signals are masked by intruding noises. Reduced intelligibility of speech may also have other effects, for example, if the understanding of speech is interrupted, performance may be reduced, annoyance may increase, and learning may be impaired. Research suggests that aircraft flyover noises exceeding approximately 60 dB interfere with speech communication. Increasing the level of the flyover noise maximum

Table 4.4-11. Percentage of Population Highly Annoyed by Noise Exposure

DNL Interval	Percentage of Persons Highly Annoyed
< 65	< 14
65-70	15-25
70-75	25-37
75-80	37-52

Adapted from National Academy of Sciences, 1977

to 80 dB will reduce the intelligibility to zero even if the speaker speaks in a loud voice.

Sleep Interference. The effects of noise on sleep are of concern primarily in assuring suitable residential environments. Early studies suggest that various noise levels between 25 and 50 dBA were associated with an absence of sleep disturbance. Because no known health effects were associated with either waking or sleep-stage changes, either measure was potentially useful as a metric of sleep disturbance.

One noise descriptor used to describe the effect of noise on sleep is the SEL. This measure takes into account an event's sound intensity, frequency content, and time duration, by measuring the total A-weighted sound energy of the event and incorporating it into a single number. Unlike DNL, which describes the daily average noise exposure, SEL describes the normalized noise from a single flyover, called an event. No interpretative criteria exist for noise for a single event.

In a 1980 review, the EPA concluded that "None of the suspected effects have been fully explored or measured," and "Chronic sleep disturbance is a potentially severe health problem, yet little is known about the long-term effects of sleep disturbances on health..." (U.S. Environmental Protection Agency, 1980).

Studies (Lukas, 1975; Goldstein and Lukas, 1980) showed great variability in the percentage of people awakened by exposure to noise. A recent review (Persons et al., 1989) of the literature related to sleep disturbance, including field as well as laboratory studies, concluded that habituation may reduce the effect of noise on sleep. The authors point out that the relationship between noise exposure and sleep disturbance is complex and affected by the interaction of many variables. The large differences between the findings of the laboratory and field studies make it difficult to determine the best relationship to use. The method developed by Lukas would estimate seven times more awakening than the field results reported by Persons. The relationship between percent awakened and SEL considers the sound attenuation provided by a building with the windows open (Appendix H).

Hearing Loss. Hearing loss is measured in dB and refers to permanent auditory threshold shift of an individual's hearing in an ear. The EPA (U.S. Environmental Protection Agency, 1974) has recommended a limiting daily energy average value of Leq 70 dBA to protect against hearing impairment over a period of 40 years. Hearing loss could result from exposure to high-intensity noise levels for a continuous and prolonged period (years). Aircraft usually do not subject people to such continuous exposure. However, this daily average energy value would translate into a DNL value of approximately 75 dBA or greater. Based on EPA reports, hearing loss is not expected in people living and working in areas exposed to DNL of 75 dB or less (U.S. Environmental Protection Agency, 1974).

Health. Research investigating the relationship between noise and adverse extra-auditory health effects has been inconclusive. Alleged extra-auditory health consequences of noise exposure that have been studied include birth defects, psychological illness, cancer, stroke, hypertension, and cardiac illnesses. Although hypertension appears to be the most biologically plausible of these consequences, studies addressing this issue have failed to provide adequate support. Studies that have found negative consequences have failed to be replicated, thereby questioning the validity of those studies (Frerichs et al., 1980; Anton-Guigis et al., 1986). Studies that have controlled for multiple factors have shown no, or very weak, associations between noise exposure and extra-auditory effects (Thompson and Fidell, 1989). The current state of technical knowledge cannot support inference of a causal or consistent relationship, nor a quantitative dose-response, between residential aircraft noise exposure and health consequences.

Animals. The literature on the effects of noise on animals is not large, and most of the studies have focused on the relation between dosages of continuous noise and effects (Belanovskil and Omel'yanenko, 1982; Ames, 1974). A literature survey (Kull and Fisher, 1986) found that the literature is inadequate to document long-term or subtle effects. No controlled study has documented any serious accident or mortality on livestock, despite extreme exposure to noise.

Land Use Compatibility. Estimates of total noise exposure resulting from aircraft operations, as expressed using DNL, can be interpreted in terms of the probable effect on land uses. The Federal Interagency Committee on Urban Noise (1980) developed guidelines for evaluating land uses in aircraft noise exposure areas (see Section 3.4.4). The land use compatibility guidelines are based on the annoyance and hearing loss considerations described above. Part 150 of the FAA regulations describes the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs. It describes the use of yearly DNL in the evaluation of airport noise environments. It also identifies those land use types that are normally compatible with various levels of exposure. Compatible or incompatible land use is determined by comparing the predicted DNL level at a site with the recommended land uses.

Noise Modeling. In order to define the noise impacts from aircraft operations at Chanute AFB, the FAA's Integrated Noise Model (INM) Version 3.9 (Federal Aviation Administration, 1980) was utilized to predict noise contours for DNL of 65, 70, and 75 dB and SEL (for definitions of descriptors see Appendix H). These contours were generated for the Proposed Action and Minor Aircraft Maintenance Operations Alternative for the baseline year (1994) and three future year projections (1999, 2004, and 2014) and overlaid on a USGS map of the base and vicinity. Input data to the INM include information on aircraft types; runway use; takeoff and landing flight tracks; aircraft altitude, speeds and engine power settings; and number of daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) operations.

Because the INM does not have the ability to predict noise generated from aircraft engine maintenance activities on the ground (e.g., run-ups), the Air Force's Noise Exposure Model (NOISEMAP) Version 6.0 was utilized (U.S. Air Force, 1990f). This model uses information about the engine power settings and atmospheric conditions to determine noise levels around the designated run-up area (Appendix H).

Surface vehicle traffic noise levels for roadways in the vicinity of Chanute AFB were analyzed using the FHWA's Highway Noise Model (Federal Highway Administration, 1978). This model incorporates vehicle mix, traffic volume projections, and speed to generate DNL.

Major Assumptions. The east-west (09/27) runway will primarily be used for normal maintenance and air cargo operations. A 25-percent easterly (runway 09) and 75-percent westerly (runway 27) directional distribution was assumed. Maintenance and cargo aircraft would use only Runway 9/27 except in emergency situations. General aviation aircraft would use Runway 18/36 only 12 percent of the time. Half of all operations were assumed to be takeoffs and half landings. Flight tracks (incoming and outgoing) are shown in Figure 4.4-1. All landing operations were assumed to follow standard civilian aircraft glide slopes and takeoff profiles provided by the noise model. For maintenance and air cargo operations, approximately 20 percent of the operations take place during the daytime (7 a.m. to 10 p.m.) and 80 percent at night (10 p.m. to 7 a.m.) for all years. Approximately 95 percent of general aviation flights will occur in the daytime.

Traffic on major roads leading to and around the base was analyzed to determine noise impacts. Traffic data used to project future noise levels were derived from the projections presented in Section 4.2.3. The arterial traffic mix was assumed to be 96 percent cars, 3 percent medium trucks, and 1 percent heavy trucks. Thirteen percent of the traffic is assumed to be nighttime traffic. Traffic data used in the analysis are presented in Appendix H.

Flight Tracks- Aviation Alternatives

Chanute AFB Rantoul, Illinois

EXPLANATION

T/TG Flight Track Identifier
— Flight Track

- LAND USE
 - ① Airfield
 - ② Aviation Support
 - ③ Institutional (Educational/
Training)
 - ④ Industrial
 - ⑤ Institutional (Medical)
 - ⑥ Commercial
 - ⑦ Public/Recreation
 - ⑧ Residential
 - ⑨ Agriculture
- - - Base Boundary
- Village of Rantoul



0 1/4 1/2 1 Mile

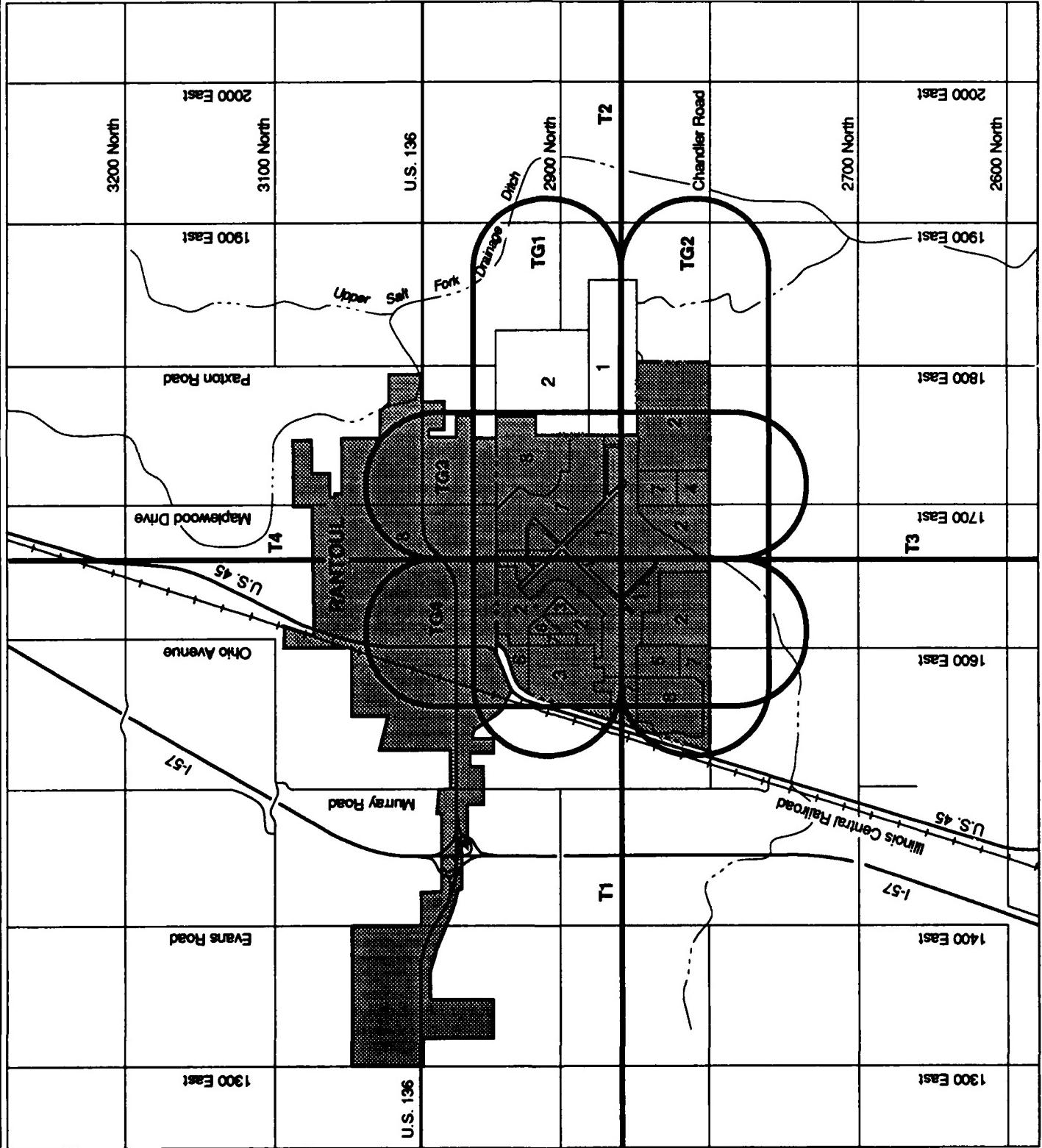


Figure 4.4-1

Rail traffic for future years was assumed to be the same as the preclosure reference presented in Section 3.4.4, and the DNL distances would not change.

4.4.4.1 Proposed Action. The results of the aircraft noise modeling for the Proposed Action are presented as noise contours in Figures 4.4-2 through 4.4-5.

In the early years for the Proposed Action, the major source of noise would be air cargo operations. The noisiest aircraft in the Proposed Action is the DC-9-30 with stage two engines. By the year 1999, the DC-9-30s would be replaced by Boeing 727-200s with stage three engines as the noisiest aircraft. These aircraft are expected to be almost completely phased out by approximately the year 2000; after that time, the noisiest aircraft would be the Boeing 757-200s. Test engine run-ups in the eastern portion of the base would not significantly increase the noise levels of DNL 65 dB or greater in the area.

Under the Proposed Action, approximately 536 acres would be exposed to a DNL of 65 dB or greater in the year 1994. This is estimated to decrease to approximately 244 acres by the year 2014 as newer and quieter aircraft are introduced. Table 4.4-12 presents the approximate acreage within each DNL compatibility range.

Table 4.4-12. Area Affected by Aircraft Noise

Year	Land Use Category	Area Within Noise Contour Range (acres)		
		DNL 65-70 dB	DNL 70-75 dB	DNL > 75 dB
1994	Proposed Action	300	121	115
	Minor Aircraft Maintenance Operations Alternative	267	106	103
1999	Proposed Action	266	107	136
	Minor Aircraft Maintenance Operations Alternative	218	100	124
2004	Proposed Action	120	59	40
	Minor Aircraft Maintenance Operations Alternative	59	24	21
2014	Proposed Action	132	66	46
	Minor Aircraft Maintenance Operations Alternative	84	30	29

**Noise Contours
(1994) - Proposed
Action**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

— Proposed Airport Layout Plan
(Proposed Action)

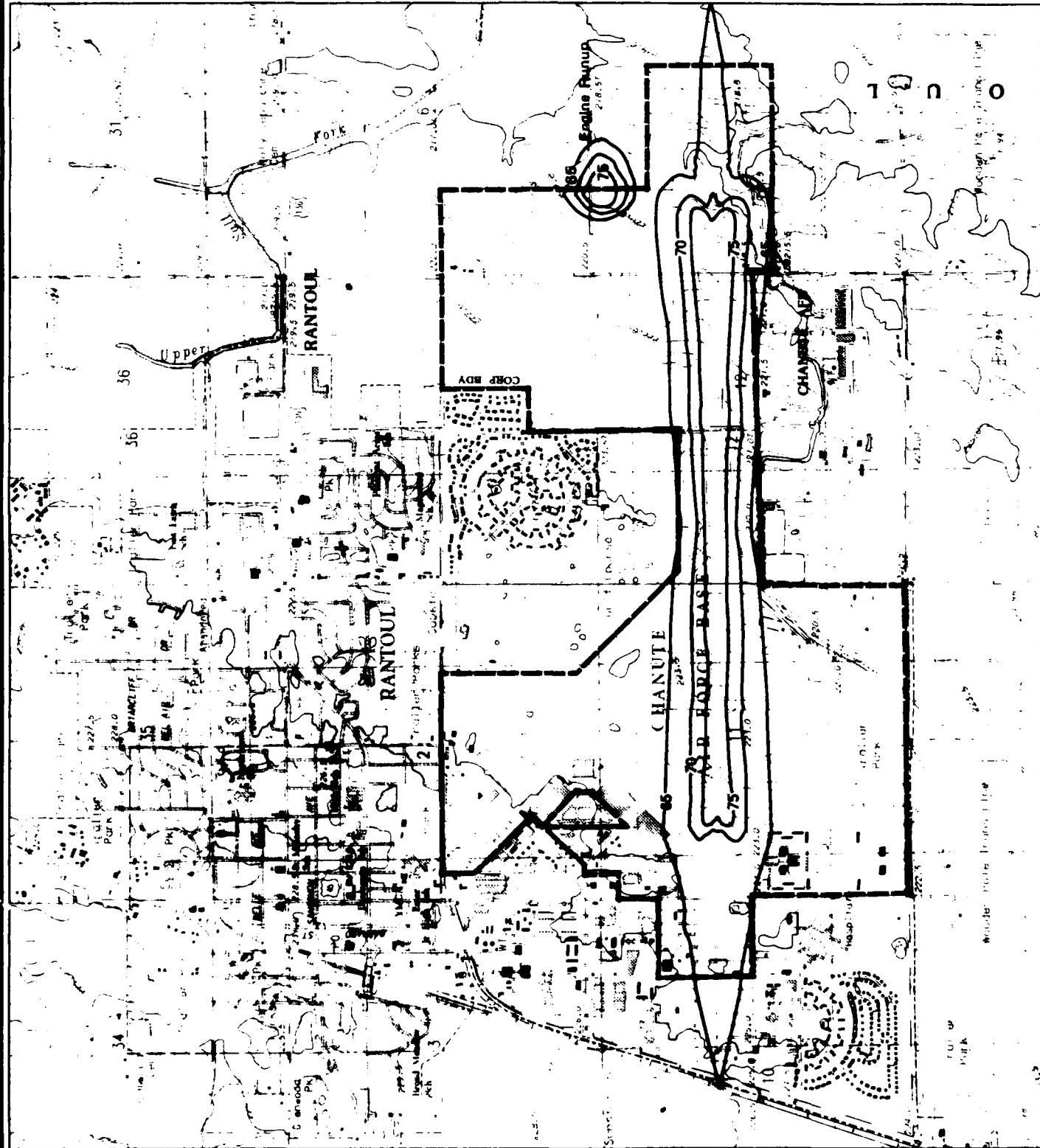


Figure 4.4-2

**Noise Contours
(1999) - Proposed
Action**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

— Proposed Airport Layout Plan
(Proposed Action)

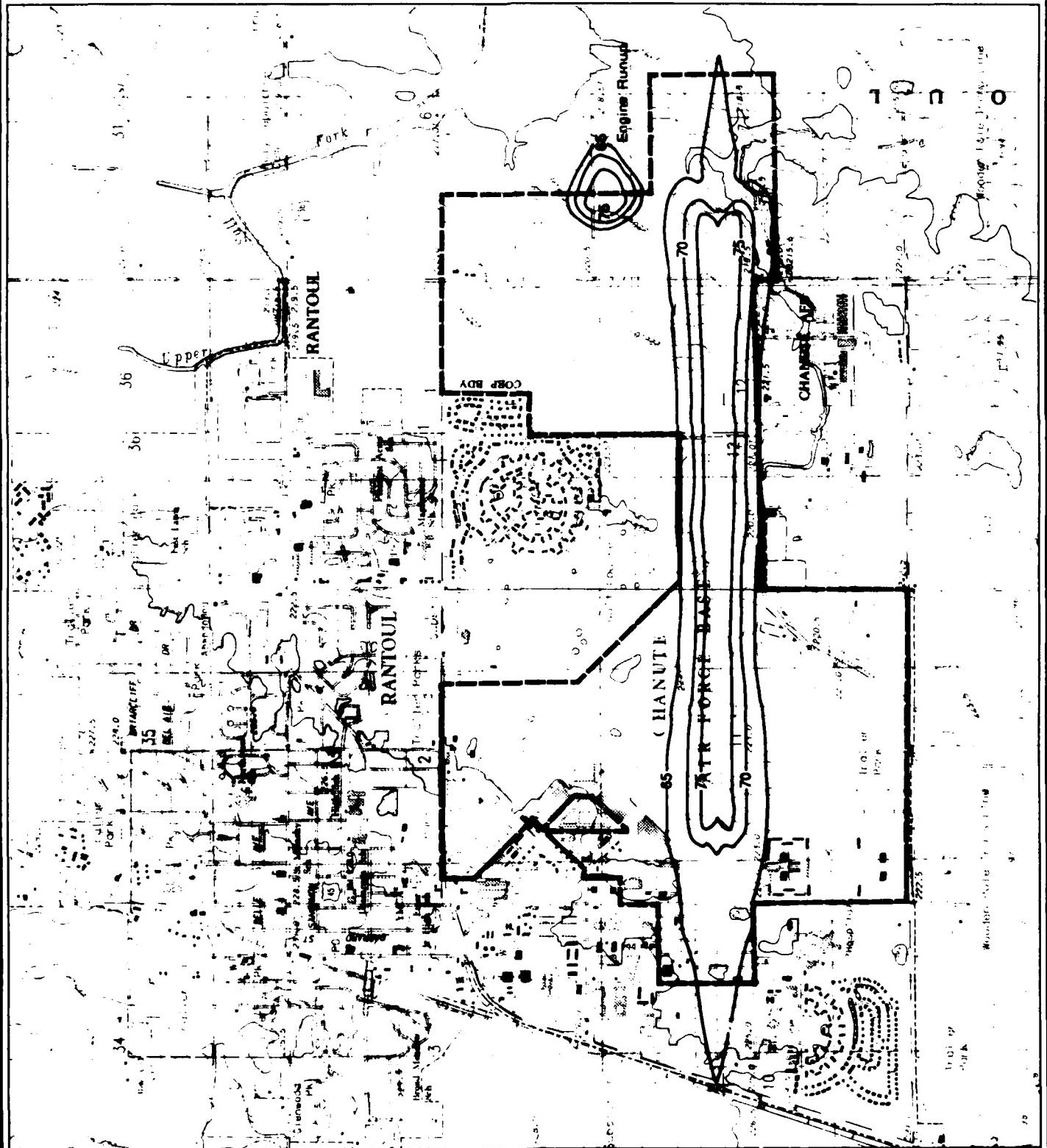


Figure 4.4-3

Noise Contours (2004) - Proposed Action

Chanute AFB
Rantoul, Illinois

EXPLANATION

Proposed Airport Layout Plan (Proposed Action)

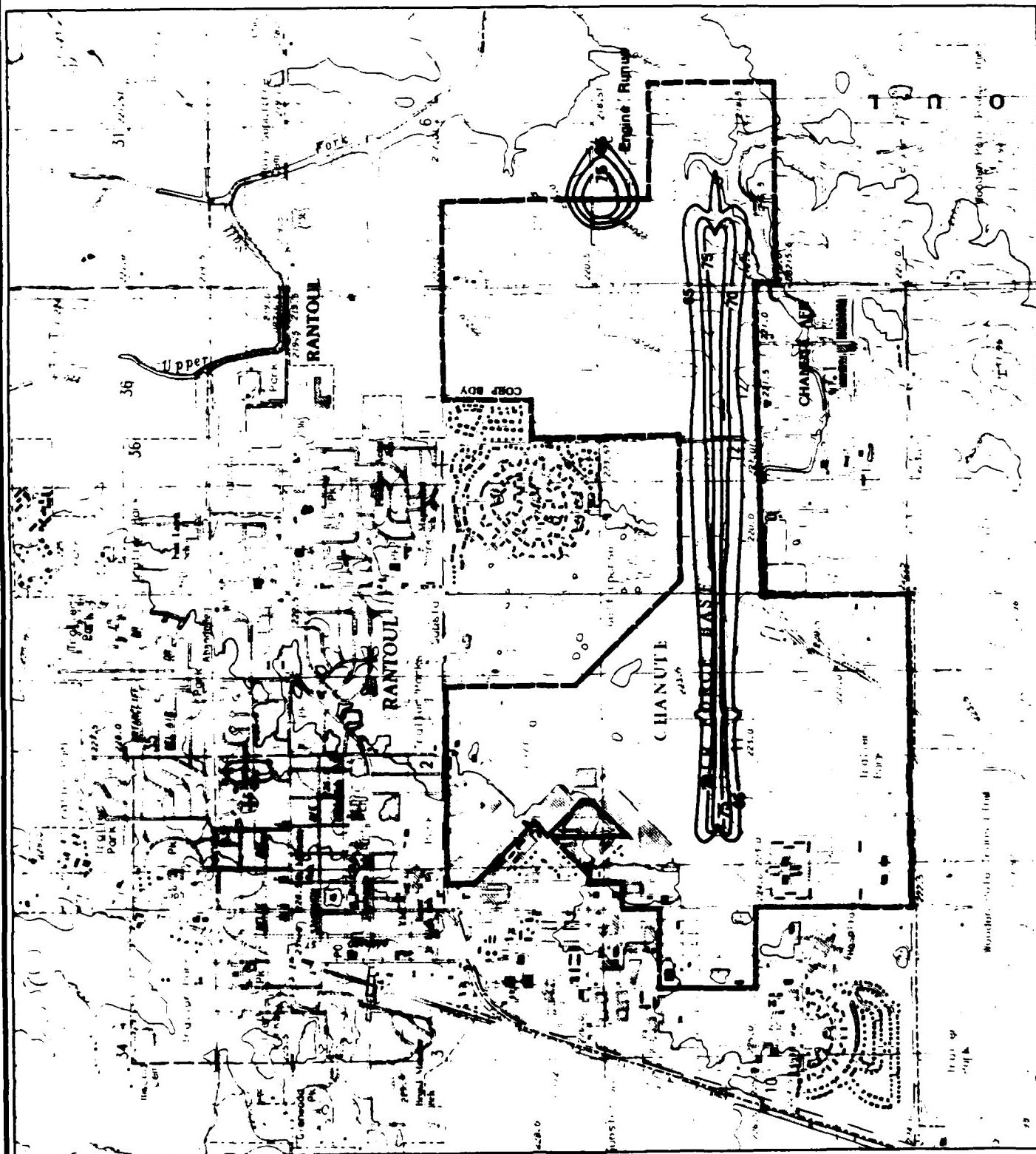


Figure 4.4-4

Noise Contours (2014) - Proposed Action

Chanute AFB
Rantoul, Illinois

EXPLANATION

— Proposed Airport Layout Plan
(Proposed Action)

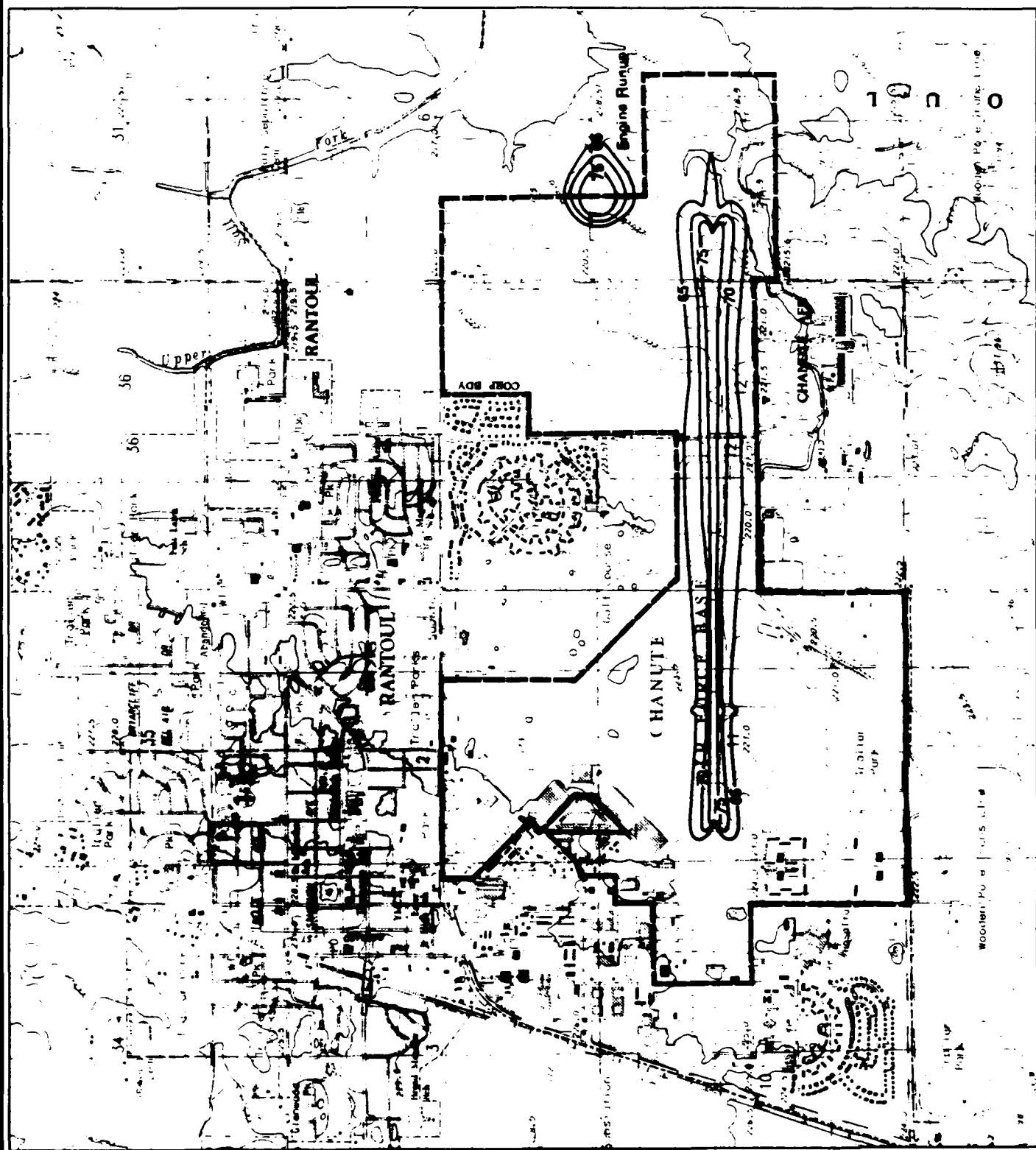


Figure 4.4-5

Analysis suggests that under the Proposed Action in 1994 land uses (e.g. recreational areas) within the DNL 65 dB noise contour would be compatible based on the land use compatibility guidelines presented in Section 3.4.4. Furthermore, no residences lie within the DNL 65 dB contours. The noisiest overflight (DC-9 with stage two engines) may affect the sleep of some residents in the area during summer months. Sound exposure levels for various aircraft flying over residential areas in the vicinity are shown in Table 4.4-13. Appendix H presents a table showing the relationship between the SELs and the percent of persons likely to be awakened by the event.

Table 4.4-13. Sound Exposure Level at Noise-Sensitive Receptors

Location	DC9-30	727-200 Re-engined Stage III	757-200
On Base			
Residential (NE Quadrant)	86	86	81
Education/Training Area (townhouses)	95	94	79
Residential (SW Quadrant)	101	100	83
Residential (Central)	95	93	80
Medical Area (Hospital)	100	99	83
Dormitories/Hotels	103	102	84
Rantoul (Mobile Home Park North of Base)	84	81	73
Gifford (Town Center)	84	84	69
Penfield (Town Center)	84	83	69
Armstrong (Town Center)	81	79	64
Fisher (Town Center)	78	76	63

The area affected by noise typically increases as operations increase. However, it is important to note that by 1999, DC-9 aircraft would no longer be used, and all Boeing 727-200s used in air cargo operations would be re-engined with quieter stage three engines. This re-engining process would resolve some of the problems associated with using older, noisier jets for these operations. By 1999, approximately 509 acres would be exposed to a DNL of 65 dB or greater. The noisiest overflight (Boeing 727-200 with stage three engines) may affect the sleep of some residents in the area during summer months.

By the year 2004, it is projected that all jets used for air cargo operations would be Boeing 757-200 aircraft. The affected area is estimated to shrink as a result of the use of these quieter, stage three aircraft. There would be no residence or recreational areas within the DNL 65 dB contour. Approximately 219 acres would be exposed to a DNL of 65 dB or greater by the year 2004. The noisiest overflight (Boeing 757-200) may affect the sleep of some residents in the area during summer months.

In 2014, there would still be no sensitive land uses within the DNL 65 dB contour. Approximately 244 acres would be exposed to DNL of 65 dB or greater. The noisiest overflight (Boeing 757-200) may affect the sleep of some residents in the area during summer months.

Surface traffic sound levels are presented in Table 4.4-14. These levels are presented in terms of DNL as a function of distance from the centerline of the roadways analyzed. Except for a few residences along Maplewood Drive, no noise-sensitive receptors have been identified within the DNL 65 dB distance.

Table 4.4-14. Distance to DNL from Roadway Centerline for the Proposed Action

Year	Roadway	Distance (ft)	
		DNL 65 dB	DNL 70 dB
1994	U.S. 45 North	150	50
	U.S. 45 South	150	50
	Maplewood Dr.	60	*
	Chandler Rd.	*	*
	Township Rd. 1800E	50	*
1999	U.S. 45 North	240	80
	U.S. 45 South	200	70
	Maplewood Dr.	90	30
	Chandler Rd.	30	*
	Township Rd. 1800E	50	*
2004	U.S. 45 North	250	90
	U.S. 45 South	220	70
	Maplewood Dr.	100	40
	Chandler Rd.	30	*
	Township Rd. 1800E	50	*
2014	U.S. 45 North	220	80
	U.S. 45 South	150	50
	Maplewood Dr.	90	30
	Chandler Rd.	30	*
	Township Rd. 1800E	50	*

*contained within roadway

Cumulative Impacts. There are no cumulative noise impacts from transportation noise sources for the Proposed Action.

Mitigation Measures. No conflicts with the FAA land use compatibility guidelines within FAR Part 150 have been identified for the Proposed Action. The airport proponent could, however, voluntarily pursue a future FAR Part 150 study to analyze operational and facility modifications to reduce aviation noise levels below DNL 65 dB.

4.4.4.2 Minor Aircraft Maintenance Operations Alternative. The contours for the Minor Aircraft Maintenance Operations Alternative are presented in Figures 4.4-6 through 4.4-9.

**Noise Contours
(1994) - Minor
Aircraft
Maintenance
Operations
Alternative**

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

- Proposed Airfield
(Minor Aircraft Maintenance
Operations Alternative)

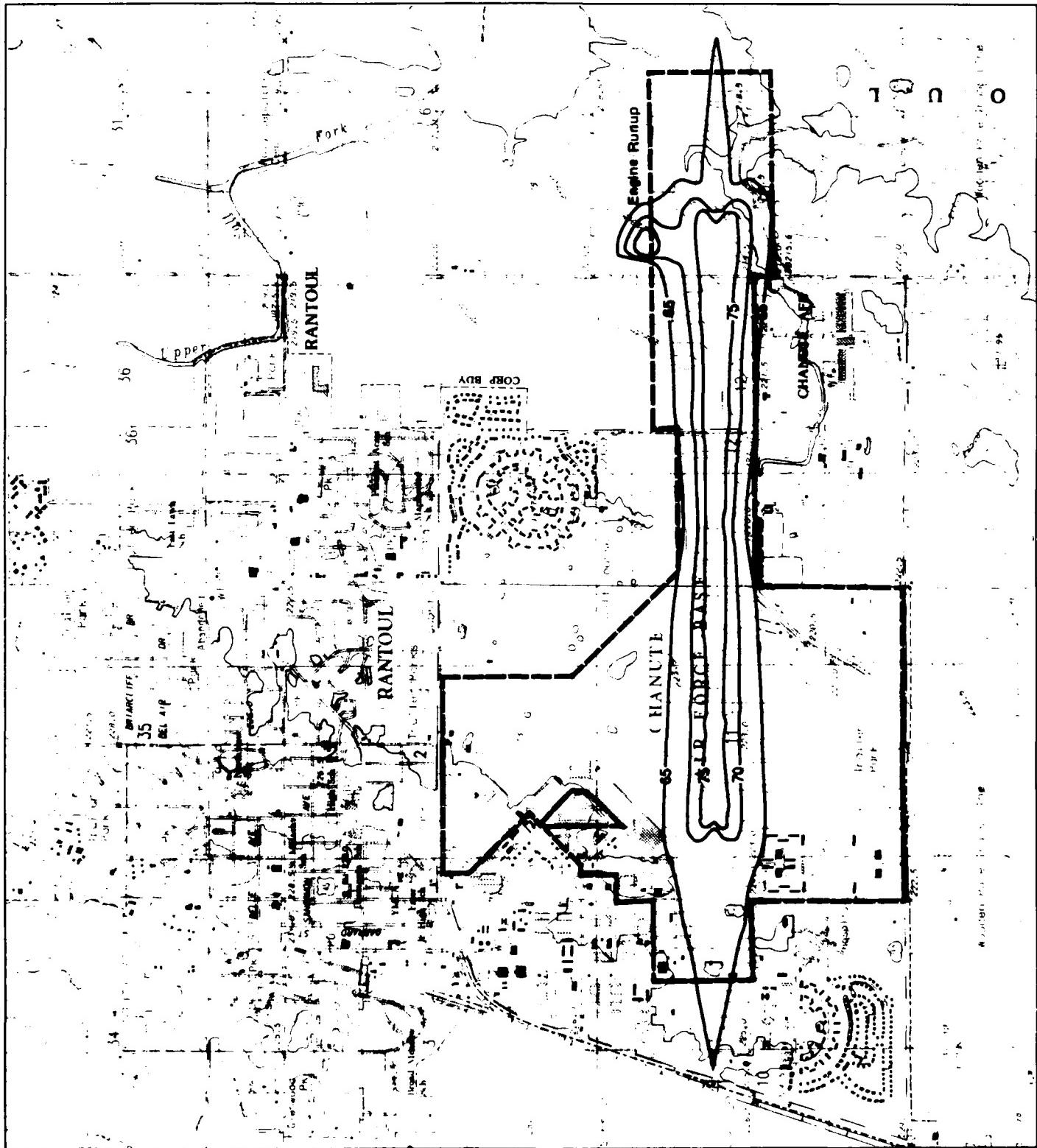
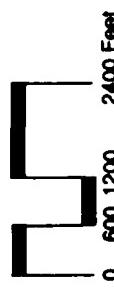


Figure 4.4-6

Noise Contours (1999) - Minor Aircraft Maintenance Operations Alternative

Chanute AFB
Rantoul, Illinois

EXPLANATION

Proposed Airfield (Minor Aircraft Maintenance Operations Alternative)

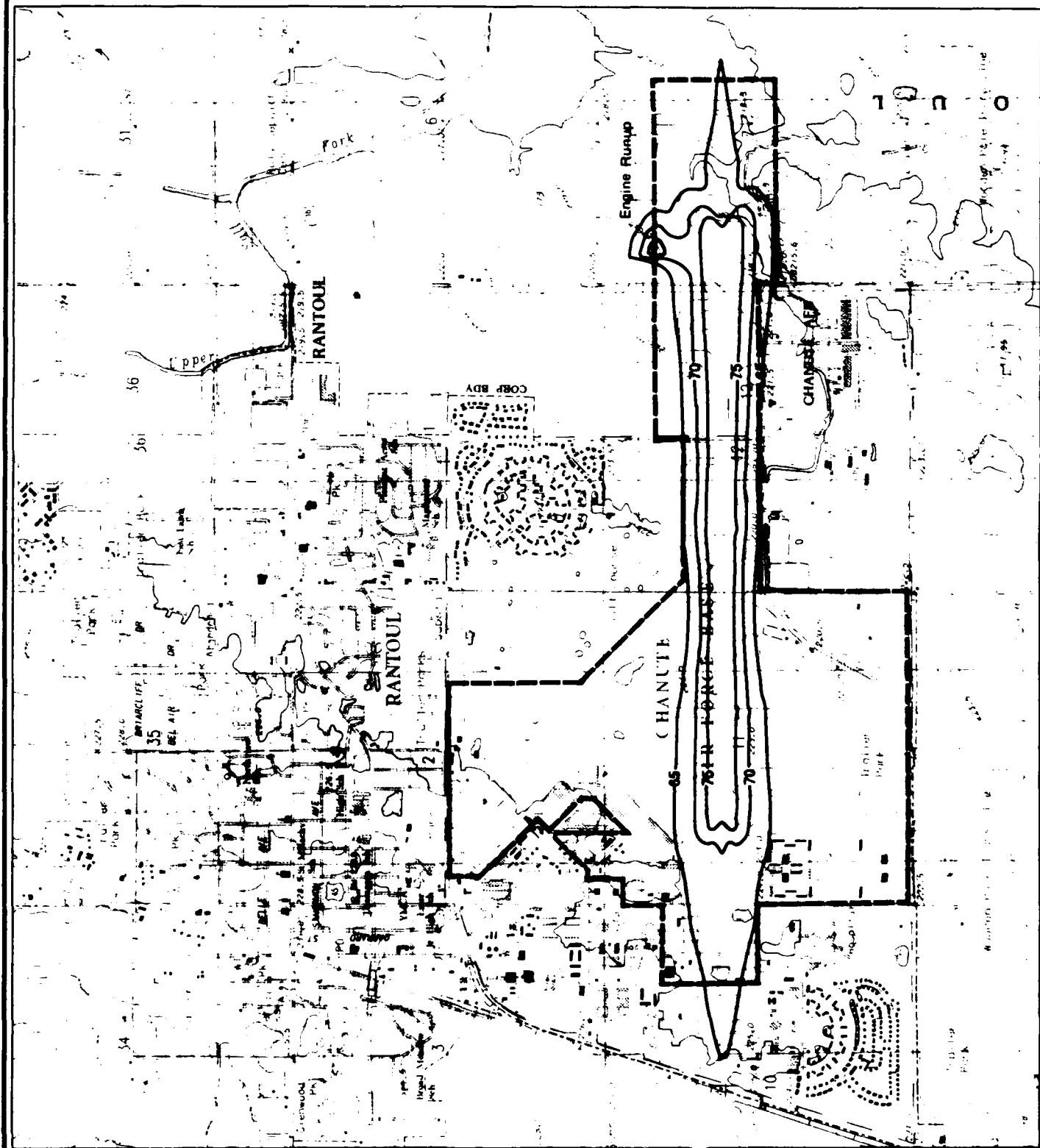


Figure 4.4-7

Noise Contours (2004) - Minor Aircraft Maintenance Operations Alternative

**Chanute AFB
Rantoul, Illinois**

EXPLANATION

Proposed Airfield (Minor Aircraft Maintenance Operations Alternative)

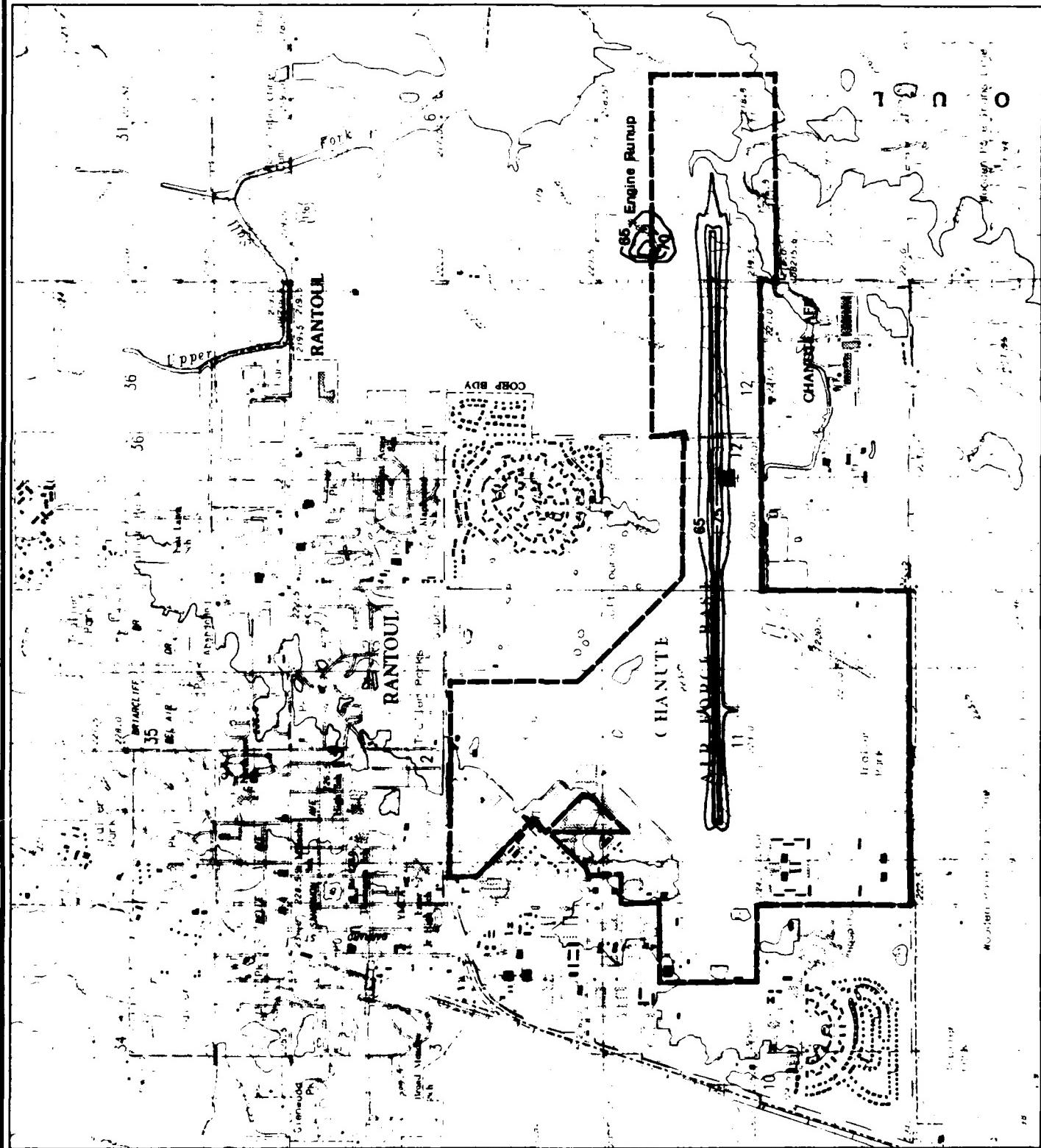


Figure 4.4-8

Noise Contours (2014) - Minor Aircraft Maintenance Operations Alternative

Chanute AFB
Bantam, Illinois

EXPLANATION

**Proposed Airfield
(Minor Aircraft Maintenance
Operations Alternative)**

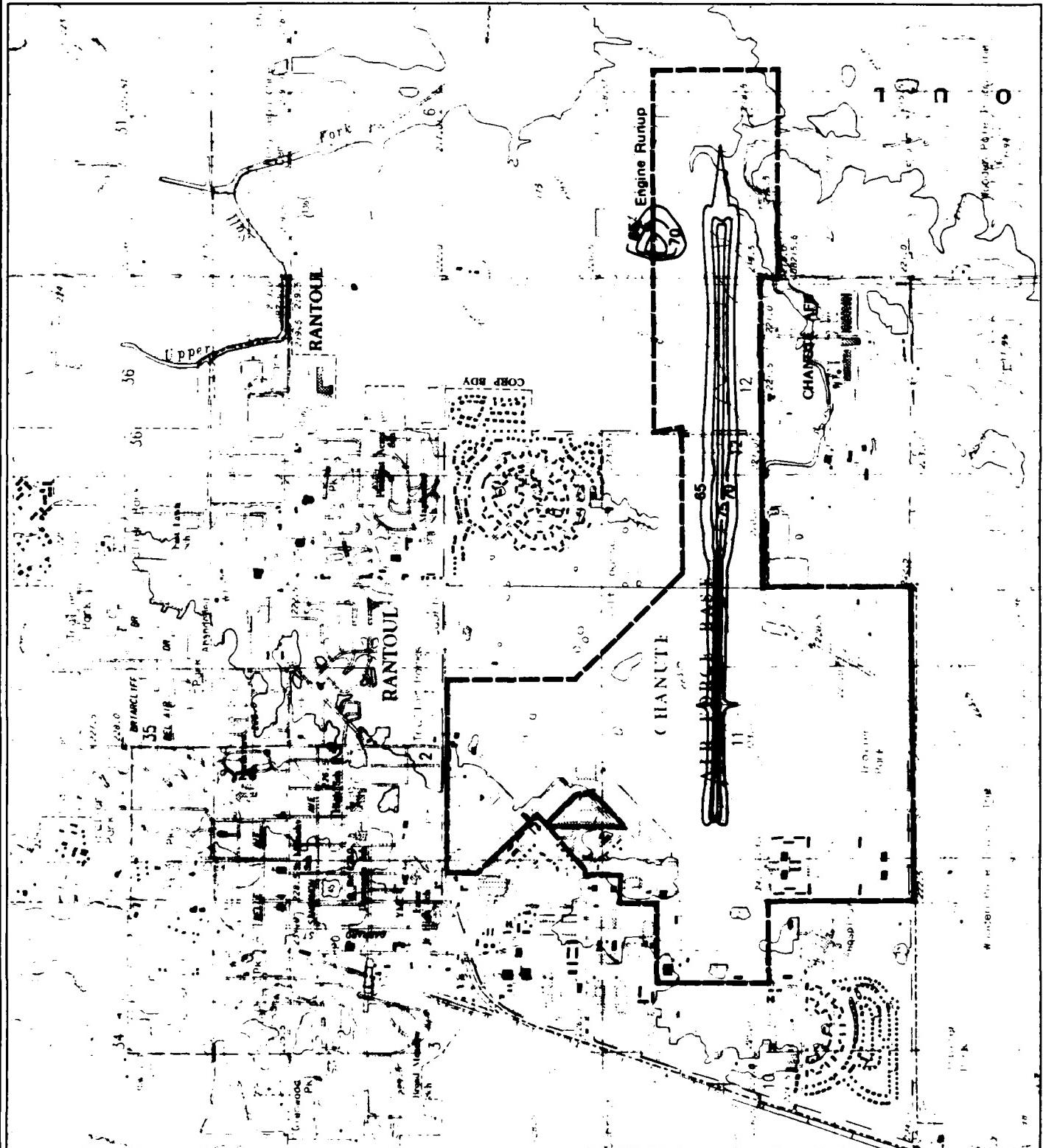
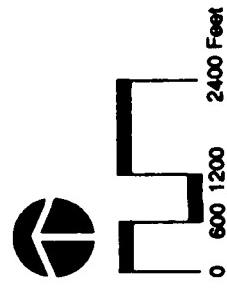


Figure 4.4-9

The Minor Aircraft Maintenance Operations Alternative would affect the surrounding area to a lesser extent than the Proposed Action because it would involve fewer flight operations. As in the Proposed Action, no residences would be exposed to DNL of 65 dB or greater. Table 4.4-12 presents the approximate number of acres within each DNL compatibility range for 1994, 1999, 2004, and 2014 for the Minor Aircraft Maintenance Operations Alternative.

Surface traffic sound levels are presented in Table 4.4-15. These levels are presented in terms of DNL as a function of distance from the centerline of the roadways analyzed. Except for the possibility of a few residences along Maplewood Drive, no noise-sensitive receptors have been identified within the DNL 65 dB distance.

Cumulative Impacts. There are no cumulative noise impacts from transportation noise sources for the Minor Aircraft Maintenance Operations Alternative.

Mitigation Measures. Although no conflicts with the FAA land use compatibility guidelines have been identified for the Minor Aircraft Maintenance Operations Alternative, the measures described for the Proposed Action could also be considered to reduce the effects of airport noise.

Table 4.4-15. Distance to DNL from Roadway Centerline for the Minor Aircraft Maintenance Operations Alternative

Year	Roadway	Distance (ft)	
		DNL 65 dB	DNL 70 dB
1994	U.S. 45 North	120	40
	U.S. 45 South	130	50
	Maplewood Dr.	30	*
	Chandler Rd.	30	*
	Township Rd. 1800E	*	*
1999	U.S. 45 North	190	60
	U.S. 45 South	170	60
	Maplewood Dr.	50	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*
2004	U.S. 45 North	220	70
	U.S. 45 South	190	70
	Maplewood Dr.	60	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*
2014	U.S. 45 North	270	90
	U.S. 45 South	230	80
	Maplewood Dr.	70	30
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*

*contained within roadway

4.4.4.3 Non-Aviation Alternative. Under the Non-Aviation Alternative, there would be no airport activity and minimal surface traffic; therefore, there would be less noise impacts than under the aviation-related alternatives. Impacts caused by air and surface traffic noise are estimated to be lower than under preclosure conditions. Surface traffic sound levels are presented in Table 4.4-16. These levels are presented in terms of DNL as a function of distance from the centerline of the roadways analyzed. No noise-sensitive receptors have been identified within the DNL 65 dB distance.

Table 4.4-16. Distance to DNL from Roadway Centerline for the Non-Aviation Alternative

Year	Roadway	Distance (feet)	
		DNL 65 dB	DNL 70 dB
1994	U.S. 45 North	90	30
	U.S. 45 South	110	40
	Maplewood Dr.	*	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*
1999	U.S. 45 North	120	40
	U.S. 45 South	120	40
	Maplewood Dr.	*	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*
2004	U.S. 45 North	140	50
	U.S. 45 South	140	50
	Maplewood Dr.	40	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*
2014	U.S. 45 North	160	60
	U.S. 45 South	160	50
	Maplewood Dr.	40	*
	Chandler Rd.	*	*
	Township Rd. 1800E	*	*

*contained within roadway

Cumulative Impacts. There are no cumulative noise impacts from transportation noise sources for the Non-Aviation Alternative.

Mitigation Measures. Noise mitigation measures are not required for the Non-Aviation Alternative because there are no adverse effects associated with this alternative.

4.4.4.4 No-Action Alternative. There would be no airport activity and minimal surface traffic for the No-Action Alternative. The surface traffic noise would be estimated to be less than that of any of the other alternatives. There would be no airport activity and minimal surface traffic under the caretaker status. Impacts caused by air and surface traffic noise are estimated to be lower than those for any of the other alternatives.

Cumulative Impacts. There are no cumulative noise impacts from transportation noise sources for the No-Action Alternative.

Mitigation Measures. Noise mitigation measures are not required for the No-Action Alternative because there are no adverse effects associated with this alternative.

4.4.5 Biological Resources

Criteria for evaluating project-related effects are based on the importance (e.g., legal, commercial, recreational, ecological, or scientific) of the resource, the proportion of the resource that would be affected relative to its occurrence in the project region, the sensitivity of the resource to activities associated with the proposed project, and the duration of the environmental ramifications associated with the effects.

Adverse impacts include those resulting in (1) reduction in the population of any rare, threatened, or endangered species; (2) degradation of biologically important habitats that are regionally rare or unusual, or are protected by federal, state, or local regulations/policies; or (3) substantial long-term (25 years or longer) loss of vegetation and of the overall capacity of the habitat to support wildlife populations. The availability and effectiveness of specific mitigation measures would determine whether these impacts could be reduced to a negligible level.

4.4.5.1 Proposed Action. Conversion of Chanute AFB to a general aviation reliever airport would result in a number of construction projects that could affect biological resources. Activities associated with construction could affect biological resources through loss of vegetation and wildlife habitat, alteration of habitat through landscaping noise and human presence, and runoff of sediments and construction materials (e.g., cement washings, paints, and fuels or lubricants accidentally spilled). Habitat alteration would be both short and long term; noise effects would be short term.

Operation of a general aviation reliever airport could affect biological resources as a result of aircraft noise, collision of animals with aircraft, increased vehicular traffic, air pollutant emissions, fires, and accidental spills of hazardous materials. Such effects could occur over the long term.

Vegetation. Activities associated with Proposed Action construction on and off base could affect biological resources through loss of vegetation and wildlife habitat, alteration of habitat through landscaping, and runoff of sediments and construction materials (e.g., cement washings, paints, and fuels or lubricants accidentally spilled). Habitat alteration would be both short and long term.

The runway would be extended into an area that is currently cultivated, causing a minor impact on vegetation. Widening roads on or leading to the base would result in removal of vegetation. In most cases, this would involve landscape species such as grasses and trees. Effects would be minimal because no biologically important habitats or protected species would be impacted. In addition, effects would be temporary if landscaping was re-established adjacent to the new roadway.

Construction of aviation support facilities adjacent to the base would result in a permanent loss of cropland through construction of buildings, roads, parking lots, and other facilities. The spaces between these facilities would likely be landscaped (or at least mowed), eliminating additional cropland. However, remodeling and new construction for commercial facilities would take place primarily in existing landscaped areas, as would renovation of residential buildings. The effects on vegetation would be minimal because the area is void of any biologically important habitat.

Accidents that occur during the operation of the facility could adversely affect vegetation. Fires could temporarily alter vegetation, and spills of toxic substances, including fuels and lubricants, that spread beyond disturbed and landscaped areas could result in a loss of vegetation. Soil contamination would have long-term effects on vegetation. Overall effects on vegetation, however, are expected to be negligible because small areas and no sensitive species would be affected. Wetlands are discussed under Sensitive Habitats.

Wildlife. Extension of the runway and new construction in an area that is currently cultivated would result in a loss of foraging habitat for game species, such as the ring-necked pheasant and cottontail rabbit. Considering the large amount of cropland habitat available in the region and that minimal cover (brush or dense, tall grass) would be lost, no measurable effects on populations of these and other species associated with cropland would be expected. In addition, management practices for pheasant would likely compensate for the small loss of foraging habitat.

During operations, aircraft noise and visual presence could startle wildlife near the runway. Projections for the Proposed Action indicate that approximately 34 flight operations (takeoffs or landings) per day (assuming activities 365 days per year) would occur in 1994, increasing gradually to 63 per day in 2014. Noise effects on wildlife would occur primarily during the day. These effects are predicted to be minimal, because few wildlife species (and individuals) would be affected in this urban and agricultural setting. (Section 4.4.4 presents additional discussion of noise effects on animals.) The potential for aircraft collision with birds, particularly waterfowl, is also a concern. The probability of bird collisions with aircraft, both day and night, is low because the base is not located in a part of the Mississippi Flyway that is heavily used and no concentrations of birds,

such as waterfowl, are known to be in the project vicinity. Thus, impacts of aircraft operations are expected to be insignificant.

Increased vehicular traffic on and in the vicinity of Chanute AFB would increase the potential for road kills of animals. Species commonly affected include rabbits, snakes, and birds such as horned larks and crows. The predicted increase in traffic from closure (1993) and preclosure levels would not be expected to have any significant effects on local wildlife populations.

Noise and human presence associated with construction activities would cause some wildlife species to avoid the construction zone. Because the project site is in an area with considerable existing human activity, most animals are adapted to some level of disturbance. Effects are expected to be short term and minimal.

Accidental fires or spills of toxic substances would be expected to affect small areas as described above for vegetation, and thus, effects on wildlife are predicted to be negligible.

Effects on aquatic biota are discussed below with wetlands.

Threatened and Endangered Species. Construction and operation of airport facilities at the project site would not adversely affect the state-listed upland sandpiper. The Proposed Action would not adversely affect any other federally or state-listed species because none are present in the area.

Sensitive Habitats. None of the proposed facility construction would directly affect wetlands on Chanute AFB or in the parcels proposed for acquisition. The potential exists, however, for indirect effects.

Runoff from construction sites could add sediments and pollutants to the tributary to Upper Salt Fork Creek and/or adjacent wetlands. Construction-related activities could affect the northernmost wetland, which is near the existing runway, through runoff of sediments or construction materials (e.g., cement washings) and possibly directly if this area is used for materials storage, equipment parking or washing, or storage of demolition materials. Runoff could also enter the stream. Such effects on wetlands could have a local and adverse effect and could range from short to long term. Effects on aquatic species would be dependent on the quantity and type of pollutants in the runoff. Effects would likely be short term and minimal although, in a worst-case situation, pollutants could kill invertebrates and fish in the stream causing local and adverse impacts in the short term. Accumulation of toxins in the habitat could also result in long-term impacts through sublethal and acute toxic effects on the resident biota.

Normal operation of the facilities is expected to have negligible effects on wetlands and aquatic biota. Accidents, however, could have adverse impacts on wetlands, particularly through spills of toxic materials.

Cumulative Impacts. When effects of the Chapman Court project are combined with the Proposed Action for Chanute AFB reuse, cumulative effects on biological resources would be increased little and not to a level requiring mitigation. The Chapman Court project would result in loss of landscape vegetation on about 50 acres that could range from short term to long term depending on the ultimate use of the property. At least part of the property would be landscaped in all of the reuse options. The overall effect on landscape vegetation and associated wildlife would be negligible with a possible increase in amount as a result of landscaping around the proposed aviation support facilities. No additional effects on wetlands or threatened and endangered species are expected.

Mitigation Measures. Conveyances of land from federal to private ownership do not necessarily reduce the level of protection afforded to jurisdictional wetlands. For example, a permit, under Section 404 of the Clean Water Act, is required for filling a wetland even when land next to or under the water is privately owned. Private owners also must comply with wetland protection provisions of the Federal Food Security Act. Executive Order 11990, Protection of Wetlands, requires that a federal agency could include appropriate restrictions on the use of properties containing wetlands when conveying such lands to non-federal agencies. The specific methods to be used to protect wetlands would be specified prior to obtaining permits for the proposed use (e.g., NPDES permit [see Section 4.4.2.1]). For example, effects of runoff to the tributary to Upper Salt Fork Drainage Ditch or adjacent wetlands during construction could be mitigated by use of temporary berms to divert or contain runoff, washing of equipment in areas where wash water can be contained and treated, and through restocking if a fish kill were to occur.

A Spill Prevention and Countermeasure Plan would be developed as part of the Proposed Action and this would minimize the potential for effects of accidents such as fires and spills of hazardous materials on biological resources.

4.4.5.2 Minor Aircraft Maintenance Operations Alternative. Effects of this alternative on biological resources would be similar to those described for the Proposed Action, but slightly reduced. Less cropland habitat would be lost because the aviation support facilities would not be built on the parcel adjacent to the east boundary of the base. Fewer roads would need to be built or upgraded for access to the facilities, so there would be fewer effects on remnant native vegetation along roads. The amount of air traffic would also be reduced, thus reducing noise effects on wildlife.

Cumulative Impacts. As for the Proposed Action, no cumulative effects requiring mitigation would result from this alternative.

Mitigation Measures. Mitigation measures would be the same as for the Proposed Action.

4.4.5.3 Non-Aviation Alternative. Non-aviation uses of Chanute AFB would have minimal effects on biological resources. Construction would be limited to alteration of parking facilities and renovation of some buildings. Demolition of some facilities may be necessary as well. All of these activities would occur in currently disturbed habitats, and effects on biological resources would be small.

Vegetation and Wildlife. Approximately 710 acres would be leased for agricultural uses, including the 300 acres that have been farmed in the past. Conversion of introduced grassland to cropland in portions of the remaining 410 acres of land would alter wildlife habitat by changing the forage and cover values. Effects on wildlife would, however, be minimal because this area is small and has been disturbed (mowed and former landfill). The increase in cropland would provide an incremental benefit to pheasants by increasing their food supply.

Sensitive Habitats. Farming activities could adversely affect wetlands on the base through direct disturbance or altered drainage and through runoff of fertilizers, herbicides, and pesticides used on the crops. The small wetland just north of Perimeter Road could be disturbed through ploughing or alteration of drainage patterns. Runoff of chemicals applied to the fields may accumulate in the wetland and ultimately affect plants and animals. This wetland has persisted although adjacent to (or within) an area that was farmed in the past. Assuming that similar farming practices would be used, effects would continue as in the past. Any damage to this wetland would be locally significant. Other wetlands would not be directly affected, but runoff of chemicals to the stream could affect vegetation and aquatic biota. Considering past land uses and the present condition of the stream, effects on wetlands as a result of increasing the area farmed are expected to be insignificant.

Because this alternative requires little construction, runoff of pollutants to the stream and wetlands in the southeast part of the base is expected to be negligible and have no significant effects on the biota present. Use and storage of hazardous materials (e.g., fuels, solvents, and lubricants) on the base would be similar to or reduced from that of the Proposed Action. Effects on biological resources would be insignificant under normal circumstances. Accidents in which toxic materials were released to wetlands, however, could result in local adverse impacts that would need to be mitigated.

Cumulative Impacts. No cumulative effects on biological resources requiring mitigation beyond that described below for this alternative would occur.

Mitigation Measures. In compliance with Executive Order 11990, agricultural leases adjacent to or including jurisdictional wetlands could include appropriate restrictions to protect these wetlands, for example (1) limiting cultivation to a minimum distance of 50 feet from a wetland, (2) prohibiting alteration of drainage patterns, and (3) limiting application of chemicals (e.g., herbicides, insecticides, and fertilizers) to the minimum necessary and to methods that minimize the potential for accidental pollution of nearby wetlands.

4.4.5.4 No-Action Alternative. Closing the base with minimal maintenance activities would be beneficial to wildlife and native vegetation in the area. The reduction in human activity and in vegetation maintenance would be beneficial to wildlife and native vegetation in the area. Continuing the farming lease would maintain the pheasant population present on the base.

Cumulative Impacts. The No-Action Alternative and Chapman Court projects combined would not result in cumulative adverse effects on biological resources.

Mitigation Measures. No mitigation measures would be necessary.

4.4.6 Cultural Resources

Potential impacts were assessed by (1) identifying types and possible locations of reuse activities that could directly or indirectly affect cultural resources, (2) identifying the nature and potential significance of cultural resources in potentially affected areas, and (3) classifying potential effects as significant, insignificant, or beneficial.

Thirty-one buildings and one structure (flagpole) have been preliminarily identified as a historic district and potentially eligible for the NRHP. One building within the district is potentially eligible on individual merit. Coordination with the Illinois SHPO to finalize a Determination of Eligibility is currently in progress.

Regulations for implementing Section 106 of the NHPA indicate that the transfer, conveyance, lease, or sale of a historic property is procedurally considered to be an adverse effect, thereby ensuring full regulatory consideration in federal project planning and execution. However, effects of a project that would otherwise be found to be adverse may be considered not adverse under the following conditions:

- When the historic property is of value only for its potential contribution to archaeological, historical, or architectural research, and when such value can be substantially preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines;
- When the undertaking is limited to the rehabilitation of buildings and structures and is conducted in a manner that preserves the historical and architectural value of affected historic property through conformance with

the Secretary's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings; or

- When the undertaking is limited to the transfer, conveyance, lease, or sale of a historic property, and adequate restrictions or conditions are included to ensure preservation of the property's significant historic features.

These three situations effectively define the range of activities that can mitigate adverse impacts of reuse. The adverse effects of transfer, conveyance, sale, or lease of historic properties on Chanute AFB can be mitigated as discussed below. The Air Force will complete the consultation process under Section 106 prior to disposal of the property.

4.4.6.1 Proposed Action. The extension of Runways 9/27 and 18/36 will disturb 231 acres off base; this area has been surveyed recently by IDOT archaeologists with negative results. The IDOT has also surveyed areas north of the base that could be disturbed as a result of road upgrades required to handle additional traffic generated by the Proposed Action. Again, results were negative (Illinois Department of Transportation, 1991). The 345 acres of land needed for construction of the new maintenance facility have recently been surveyed by the IDOT, and survey results are negative. In compliance with the Illinois State Historic Preservation Act (IHPA) (Public Act 86-707), a cultural resource clearance for these areas was obtained from the Illinois Historic Preservation Agency on 4 March 1991 (see Appendix E).

A number of potential reuse activities could affect structures considered potentially eligible for listing on the NRHP. Although the project specifications are not presently known, demolition and/or renovation of some existing structures in the northwest quadrant of the base would likely be required to accommodate the development of aviation support, commercial development, education/training, and residential land uses. New facility construction could also take place in this area to meet reuse needs. Given that 31 buildings and 1 structure in this area may be assumed eligible for listing on the NRHP, the Proposed Action has the potential to affect the integrity and setting of these historic resources. Based on the application of mitigation measures described below, these effects are not considered significant.

Because there are no significant archaeological resources on base, reuse activities will not affect these types of resources. Furthermore, Native Americans are not anticipated to be concerned with reuse activities on base.

Paleontological resources are unlikely to be affected. Fossils are extremely rare in the glacial soils that characterize the project area and those that do occur are primarily small fragments of limited scientific importance. Potential effects from new facility construction are not considered significant.

Cumulative Impacts. The Proposed Action, in combination with the disposal of Chapman Court, will not result in cumulative impacts to cultural resources, even though disposal could result in the demolition or rehabilitation of existing structures. The Chapman Court structures lack architectural or historical significance and the IHPA has concurred with previous Air Force decisions regarding Chapman Court demolition or rehabilitation (Illinois State Historic Preservation Office, 1985). In addition, Chapman Court has been so highly disturbed by construction activities that it lacks the potential to contain intact archaeological resources.

Mitigation Measures. The lack of detailed specifications associated with the Proposed Action precludes identifying project impacts and mitigation measures for particular structures. However, general procedures can reduce the impacts to an insignificant level. Potential effects may be mitigated by implementation of either or both of the following recommendations: (1) properties may be sold or conveyed to non-federal owners with covenants that ensure that future owners will abide by cultural resource management procedures dictated by the NHPA, or their equivalent as approved by the SHPO and the Advisory Council on Historic Preservation; (2) the Air Force could preserve the value of the historic properties through historical documentation procedures developed in consultation with the Illinois SHPO.

In accordance with Section 106 of the NHPA and its implementing regulations, the Air Force would consult with the SHPO and the Advisory Council on Historic Preservation during the development and implementation of specific procedures and mitigation strategies. Mitigation proposed would comply with the appropriate standards and guidelines established for historic preservation activities by the Secretary of the Interior and other federal, state, and local regulations, as applicable. A treatment plan and agreement document, if applicable, would be initiated by the Air Force, detailing the methods of treatment of historic properties developed during the consultation process.

4.4.6.2 Minor Aircraft Maintenance Operations Alternative. The discussion related to the transfer, sale, or lease of federal property presented in Section 4.4.6.1 is equally appropriate for this alternative.

This alternative is similar to the Proposed Action, but requires the acquisition of less off-base land (231 versus 576 acres) because there would be no development of a major maintenance facility. Consequently, this alternative has a lower potential for affecting cultural resources than does the Proposed Action.

Cumulative Impacts. The Minor Aircraft Maintenance Operations Alternative, in combination with disposal of Chapman Court, will not result in cumulative impacts for reasons described in the cumulative impact portion of Section 4.4.6.1.

Mitigation Measures. Appropriate mitigation measures are the same as those outlined for the Proposed Action.

4.4.6.3 Non-Aviation Alternative. The discussion related to the transfer, sale, or lease of federal property presented in Section 4.4.6.1 is applicable here.

The types of project-related effects that could occur with the Non-Aviation Alternative are similar to those for the Proposed Action and the Minor Aircraft Maintenance Operations Alternative, but non-aviation reuse has the lowest potential for impacts. Reasons for the low impact potential include (1) a lack of off-base ground disturbance associated with facility construction, (2) a lack of new building construction on base, and (3) little proposed demolition and renovation of existing historic structures on base.

Cumulative Impacts. The Non-Aviation Alternative will not result in cumulative impacts when considered in combination with disposal of Chapman Court for reasons described in the cumulative impact portion of Section 4.4.6.1.

Mitigation Measures. Appropriate mitigation measures are the same as those outlined for the Proposed Action.

4.4.6.4 No-Action Alternative. Effects of this alternative would be lower than those for all other alternatives. Maintenance and repair of existing buildings during caretaker status may result in physical changes to architectural qualities that make historic structures potentially eligible for listing on the NRHP. In addition, some historic structures may not receive maintenance necessary to preserve their structural integrity. Modification or demolition of such structures may be deemed necessary for public health and safety. These impacts are not considered significant, given the application of mitigation measures described for the Proposed Action.

Because there will be no new construction, there is no potential for effects on paleontological resources.

Cumulative Impacts. The No-Action Alternative will not result in cumulative impacts for reasons described in the cumulative impact portion of Section 4.4.6.1.

Mitigation Measures. Preservation or data recovery for historic properties that would not be maintained under caretaker status would be undertaken in compliance with standards and guidelines described in Section 4.4.6.1. Specific mitigations would be defined in consultation with the SHPO, and be detailed in a treatment plan and agreement document, if applicable, initiated by the Air Force.

4.5 SECTION 4(f) EVALUATION

Section 4(f) of the Department of Transportation Act provides that the Secretary of Transportation shall not approve any transportation-related program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land of an historic site of national, state, or local significance as determined by the officials having jurisdiction thereof unless there is no feasible or prudent alternative to the use of such land and such program or project includes all possible planning to minimize harm resulting from the use. No wildlife or waterfowl refuges are located in proximity to Chanute AFB. No on-base or off-base recreational facilities or parks will be directly impacted as a result of construction activities for airport or aviation-related development purposes. The proposed reuse of the base includes making some existing on-base facilities available for public use which would then qualify them as Section 4(f) lands. Under both the Proposed Action and the Minor Aircraft Maintenance Operations Alternative, portions of the parade grounds, static aircraft display area, ballfields, and tennis courts would be exposed to noise levels of less than DNL 70 dB. The other on-base recreation facilities (golf course, Heritage Lake, youth center, athletic forum, arts and crafts facility, and bowling alley) would be exposed to noise levels of less than DNL 65 dB for both alternatives. Land use compatibility guidelines, stipulated in the Federal Aviation Administration's FAR Part 150, "Airport Noise Compatibility Planning", indicate that these land uses are compatible with those noise exposure levels. In addition, there are no other public parks or recreation areas in the vicinity of Chanute AFB which would be exposed to incompatible noise levels. The Air Force is continuing to coordinate with the SHPO with regard to cultural resources. The SHPO has indicated that the procedures for cultural resources, which are outlined in the EIS, appear to be adequate. It should also be noted that any of the on-base buildings that may be found to be of historic significance have been in an area designated for aviation use, and, therefore, the project should have no adverse impacts with regard to aircraft noise and land use incompatibility. Based on this information, there should be no adverse impacts on Section 4(f) lands.

4.6 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources will have on future generations. Irreversible effects primarily result from use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural site).

Disposal of Chanute AFB will not result in any irreversible and irrevivable commitments of resources. Land reuse alternatives may involve the loss of nonrenewable resources, such as prime farmland.

4.7 RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY OF THE ENVIRONMENT

Short-term uses of the biophysical components of man's environment include direct construction-related disturbances and direct impacts associated with an increase in population and activity that occurs over a period of less than 5 years. Long-term uses of man's environment include those impacts occurring over a period of more than 5 years, including permanent resource loss.

Short-term use based on redevelopment of Chanute AFB will not substantially differ from use of the base prior to closure. Therefore, the long-term productivity of the environment at Chanute AFB will not be significantly and adversely affected by the proposed disposal and reuse action.

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CHAPTER 5

CONSULTATION

AND COORDINATION

5.0 CONSULTATION AND COORDINATION

The federal, state and local agencies and private agencies/organizations that were contacted during the course of preparing this Environmental Impact Statement are listed below. Correspondence with these agencies/organizations is on file at the AFRCE-BMS, Norton AFB, California, or is included in Appendices E or K of this EIS.

FEDERAL AGENCIES

The Federal Aviation Administration, as a cooperating agency, provided comments on the DEIS that have been incorporated into the FEIS.

Environmental Protection Agency, Region V

National Solid Waste Management Association

United States Air Force, Chanute AFB

The United States Department of the Interior, Fish and Wildlife Service, provided a letter certifying that there are no threatened or endangered species, or other wildlife, that would be affected by proposed reuse activities at Chanute AFB. Therefore, no further action under Section 7 of the Endangered Species Act of 1973, as amended, is required.

Veterans Administration

STATE AGENCIES

The Illinois Department of Transportation, as a cooperating agency in the preparation of the EIS, provided extensive information and consultation services.

The Illinois Department of Agriculture, in a letter to the Illinois Department of Transportation, indicated that reuse of the base as planned under the Proposed Action would be in compliance with Illinois' Farmland Preservation Act.

Illinois Department of Commerce and Community Affairs

Illinois Department of Conservation, in a letter to the Illinois Department of Transportation, indicated that no known records of state-listed threatened or endangered species or natural areas are present in or near the project area.

Illinois Environmental Protection Agency

Illinois State Geological Survey

The Illinois Historic Preservation Agency has reviewed the DEIS and coordination with this agency continues with regard to the determination of eligibility of potential historic structures on Chanute AFB, in accordance with Section 106 of the National Historic Preservation Act.

Illinois Natural History Survey

Illinois State Board of Education

Illinois State Fire Marshall Office

Illinois Water Survey

Soil Conservation Service

LOCAL/REGIONAL AGENCIES

County of Champaign Regional Planning Commission

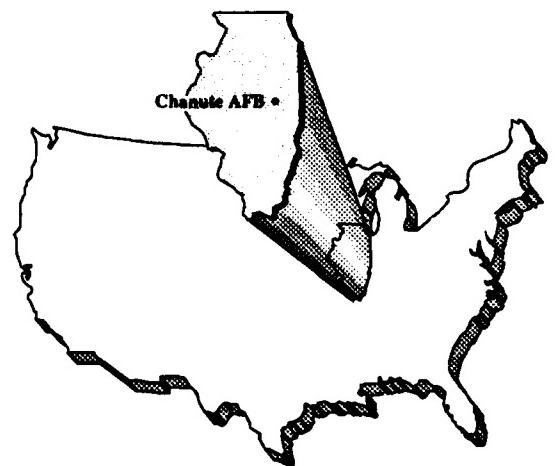
Village of Rantoul

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CHAPTER 6

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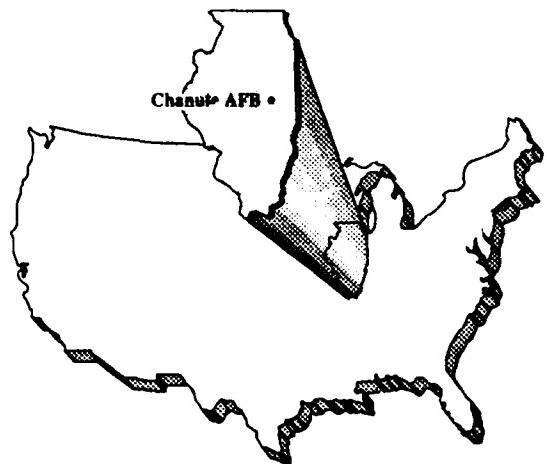
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CHAPTER 7 REFERENCES

7.0 REFERENCES

- Ames, D.R., 1974. Sound stress and meat animals, Proceedings of the International Livestock Environment Symposium, Lincoln, Nebraska, pp. 324-330.
- AMTRAK, 1990. Fall/Winter 1990/1991 Amtrak Train Timetables, National Railroad Passenger Corporation Form 12, October.
- Anderson, R., 1960. Sand and Gravel Resources of Champaign County, Illinois, Illinois State Geological Survey.
- Anton-Guirgis, H., B. Culver, S. Wang, and T. Taylor 1986. Exploratory Study of the Potential Effects of Exposure to Sonic Boom on Human Health, Vol. 2, Epidemiological Study, (Report No. AAMRL-TR-86-020).
- Belanovskil, A.S., and V.A. Omel'yanenko, 1982. Acoustic stress in commercial poultry production, Soviet Agricultural Science, 11:60-62.
- Chicago Airports District Office, 1990a. Letter to Illinois Department of Transportation, regarding airport layout plan for Chanute AFB, April 9.
- Chicago Airports District Office, 1990b. Letter to Mayor Katy Podagrosi, Village of Rantoul, regarding aeronautical study of Chanute AFB, September.
- City Planning Associates, Inc., 1967. Comprehensive Development Plan, prepared by City Planning Association, Inc. for the Village of Rantoul, Illinois.
- Clark, Dietz and Associates, 1990. Infiltration/Inflow Analysis of Wastewater Collection System at Chanute AFB.
- Coffman Associates, Inc., 1989. University of Illinois - Willard Airport (F.A.R. Part 150) Noise Compatibility Study Summary Report.
- Council on Environmental Quality, 1978. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.
- Crawford, Murphy and Tilley (CMT), 1990. Airport Layout Plan Update, May.
- Dedrick, K.G., 1984. Federal Wetlands Protection Under the Rivers and Harbors Act of 1899: An Historical Overview in California Riparian Systems, University of California Press, Berkeley.
- EDAW, Inc.; Hammer, Siler, George and Associates; and Farnsworth and Wylie, P.C., 1990. Chanute Air Force Base Reuse Plan, prepared for Village of Rantoul, Illinois.
- EG&G Idaho, Inc., 1990. Chanute Air Force Base Underground Storage Tank Management Plan, draft, prepared for the U.S. Air Force Air Training Command and the U.S. Department of Energy.
- Engineering-Science, 1983. Installation Restoration Program Phase I - Records Search, Chanute AFB, Illinois, prepared for the United States Air Force, HQ AFESC/DEV, Tyndall AFB, Florida, and HQ ATC/DEV, Randolph AFB, Texas.
- Federal Aviation Administration, 1977. Airport-Land Use Compatibility Planning, Advisory Circular 150/5050-6, December 30.

- Federal Aviation Administration, 1980. Integrated Noise Model Version 3.9 User's Guide, (Report No. FAA-EE-81-17).
- Federal Aviation Administration, 1983a. Airport Capacity and Delay, Advisory Circular 150/5060-5.
- Federal Aviation Administration, 1983b. Policies and Procedures for Considering Environmental Impacts, FAA Order 1050.1D.
- Federal Aviation Administration, 1985. Airport Environmental Handbook, Order 5050.4A.
- Federal Aviation Administration, 1990. Standard for Specifying Construction of Airports, (Change 10), Temporary Air and Water Pollution, Soil Erosion and Siltation Control, Advisory Circular 150/5370-10, 15 June.
- Federal Emergency Management Agency, 1984. Flood Insurance Rate Map: County of Champaign, Illinois, Panel 50 and 125, of 300.
- Federal Highway Administration, 1978. Highway Noise Model, FHWA-RD-77/18, December.
- Federal Interagency Committee for Wetland Delineation, 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, DC.
- Federal Interagency Committee on Urban Noise, 1980. Guidelines for Considering Noise in Land Use Planning and Control, published by U.S. Department of Transportation.
- Fidell, S., T.J. Schultz, and D.M. Green, 1988. A theoretical interpretation of the prevalence rate of noise-induced annoyance in residential populations, Journal of the Acoustical Society of America, 84(6).
- Frerichs, R., B. Beaman, and A. Coulson, 1980. Los Angeles Airport noise and mortality - Faulty analysis and public policy, American Journal of Public Health, 70, 357-362.
- Goldstein, J., and J. Lukas, 1980. Noise and Sleep: Information Needs for Noise Control, Proceedings of the Third International Congress on Noise as a Public Health Problem (ASHA Report No. 10), 442-448.
- Hanson Burke, Inc., no date. Airport Layout Plan for Rantoul National Aviation Center, Chanute Field, Rantoul, Illinois, preliminary draft.
- Hatano, M.M., 1982. Noise impact of rail passenger service, Internoise '82 Proceedings, pp.201-224.
- Heigold, P., and T. Larson, 1990. Sesimicity of Illinois, Illinois State Geological Survey.
- Hewings, G., 1989. Phase II: Economic Impact Report of the Proposed Closure of Chanute AFB on the Village of Rantoul, May 1.
- Illinois Central Railroad, 1990. A letter from John E. Tuckett, Supervisor of Track, to Mr. Gordon E. Dill, 3345 CES/DEE, Chanute AFB, detailing a railroad track inspection of July 13, 1990, dated July 16, 1990.
- Illinois Department of Commerce and Community Affairs, 1990a. Community Profile, November 8.
- Illinois Department of Commerce and Community Affairs, 1990b. Enterprise Zone Community Profile for Rantoul, Champaign County, January 1.
- Illinois Department of Conservation, 1990. Checklist of Endangered and Threatened Animals and Plants of Illinois, Illinois Endangered Species Protection Board, April.

Illinois Department of Transportation and Commerce, 1989. The State of Illinois Presentation of a National Aviation Center.

Illinois Department of Transportation, 1986. 1986 Traffic Map, Village of Rantoul, Champaign County, Illinois, prepared by the Department of Transportation, Office of Planning and Programming in cooperation with the U.S. Department of Transportation Federal Highway Administration.

Illinois Department of Transportation, 1987. Illinois Rail Plan Update.

Illinois Department of Transportation, 1988. 1988 Average Daily Total Traffic Map, State Primary System, prepared by the Department of Transportation, Office of Planning and Programming in cooperation with the U.S. Department of Transportation Federal Highway Administration.

Illinois Department of Transportation, 1989. 1989 Average Daily Total Traffic Map, State Primary System, prepared by the Department of Transportation, Office of Planning and Programming in cooperation with the U.S. Department of Transportation Federal Highway Administration.

Illinois Department of Transportation, 1990. Traffic Study for Aircraft Maintenance Operations at Chanute AFB, unpublished.

Illinois Department of Transportation, 1991. Environmental Study, Conversion of 345 Acres of Agricultural Land Adjacent and Directly East of Chanute Air Force Base, and the Associated Roadway Work, March 19.

Illinois Environmental Protection Agency, 1987. Illinois 1987 Annual Air Quality Report, Division of Air Pollution Control, Springfield.

Illinois Environmental Protection Agency, 1988. Illinois 1988 Annual Air Quality Report, Division of Air Pollution Control, Springfield.

Illinois Environmental Protection Agency, 1989a. Illinois 1989 Annual Air Quality Report, Division of Air Pollution Control, Springfield.

Illinois Environmental Protection Agency, 1989b. Public Water Supply Data Sheet for Chanute Air Force Base, Division of Public Water Supplies.

Illinois Environmental Protection Agency, 1990a. Available Disposal Capacity for Solid Waste in Illinois, Fourth Annual Report, Division of Land Pollution Control, Solid Waste Management Section, October, Springfield, Illinois.

Illinois Environmental Protection Agency, 1990b. Geographic Designations of Attainment Status of Criteria Pollutants, Subpart C, Section 107, CAA Amendments of 1977, Division of Air Pollution Control, Springfield, Illinois, October.

Illinois Environmental Protection Agency, 1990c. Illinois Rules and Regulations - Title 35: Environmental Protection, Subtitle B: Air Pollution, Chapter I: Pollution Control Board.

Illinois Fish and Wildlife Information System, 1990. Computer listing of bird and mammal species reported in Champaign County.

Illinois Historic Preservation Agency, 1987. Letter to Lynn Engleman, CTTC, regarding an archaeological surface survey of Chanute AFB, December.

Illinois Natural History Survey, 1990. Wetland Determination at Chanute Air Force Base, Champaign County, Center for Biogeographic Information.

Illinois State Historic Preservation Office, 1985. Letter to Col. Evans T. Parker, CTTC, Chanute AFB regarding the demolition of Chapman Court and other sites on base, February 21.

Illinois Water Survey, 1989. Illinois Aquifer Properties Database Computer Listing.

Kempton, J.P., W.H. Johnson, P.C. Heigold, and K. Cartwright, 1990. Mahomet Bedrock Valley in East-Central Illinois: Topography, Glacial Drift Stratigraphy and Hydrogeology.

Kempton, J.P., and W.J. Morse, 1982. Hydrogeologic Evaluation of Sand and Gravel Aquifers in East Central Illinois.

Kimball, L.A., 1990. Draft Fish and Wildlife Management Plan for Chanute Air Force Base, Illinois, for Plan Period February 1990 to February 1995.

Kull, R., and A. Fisher, 1986. Supersonic and Subsonic Aircraft Noise Effects on Animals: A Literature Survey, Report No. AAMRL-TR-87-032.

Lineback, J., 1979. Quarternary deposits of Illinois, 1:500,000-scale map, Illinois State Geological Survey.

Lukas, J., 1975. Noise and Sleep: A literature review and a proposed criterion for assessing effect, Journal of the Acoustical Society of America, 58(6).

National Academy of Sciences, 1977. Guidelines for Preparing Environmental Impact Statements on Noise, Report of Working Group on the Committee on Hearing, Bioacoustics, and Biomechanics, National Research Council, Washington, DC.

National Academy of Sciences, 1981. The Effects on Human Health from Long-Term Exposure to Noise, Report of Working Group 81, Committee on Hearing, Bioacoustics and Biomechanics, The National Research Council, Washington, DC.

Pan Am Management Systems, Inc., 1990. Preliminary Report: A Financial Management Plan for Chanute Air Force Base.

Pearsons, K., D. Barber, and B. Tabachnick, 1989. Analyses of the Predictability of Noise-Induced Sleep Disturbance, (Report No. HSD-TR-89-0029), BBN Systems and Technologies Corporation

Penny, J.C., and T.G. Harkness, 1984. Fish and Wildlife Management Plan for Chanute Air Force Base, Illinois and Paxton, Illinois, Recreation Area for Plan Period February 1985 - February 1990.

Pliskin, K., and R.E. Bergstrom, 1975. Glacial Drift in Illinois: Thickness and Character.

Radian Corporation, 1990. Chanute AFB Environmental Compliance Assessment and Management, April.

Rand McNally, 1985. Handy Railroad Atlas of the United States.

Saurenman, H.J., J.T. Nelsen, and G.P. Wilson, 1982. Handbook of Urban Rail Noise and Vibration Control, U.S. Department of Transportation.

Short, M., 1989. Facility Related Stream Survey: Biological and Water Quality Survey of Salt Fork (BPJG) and an Unnamed Tributary, U.S.E.P.A. Reach Index 05120109-012/in the Vicinity of the Rantoul Wastewater Treatment Plant, Champaign County, 1989, Illinois Environmental Protection Agency, Division of Water Pollution Control.

Short, M., and M. Joseph, 1987. An Intensive Survey of the Vermillion River Basin 1985-1986, Staff Report, Illinois Environmental Protection Agency, Division of Water Pollution Control.

Sodemann and Associates, Inc., 1990. Analysis of Impacts on Wastewater System due to Closure of Chanute AFB.

State of Illinois, 1990. Site Evaluation: United Airlines.

Swing, J.W., and D.B. Ples, 1973. Assessment of Noise Environments Around Railroad Operation, The Association of American Railroads.

The Urban Land Institute (ULI), 1990. An Evaluation of Development Potential and Land Management Strategies for the Village of Rantoul Pertaining to the Closure of Chanute Air Force Base, April.

Thompson, S., and S. Fidell, 1989. Feasibility of epidemiologic research on nonauditory health effects of residential aircraft noise exposure, BBN Report No. 6738, Canoga Park, California: BBN Systems and Technologies.

Transportation Engineering Agency, 1987. Traffic Engineering Study, Chanute Air Force Base, Illinois, MTMCTEA Report TE 85-6a-60, Military Traffic Management Command, Newport News, VA.

Transportation Research Board, 1985. Highway Capacity Manual, Special Report 209, National Research Council, National Academy of Sciences, Washington, DC.

Ulaszek, E. F., and T. C. Brooks, 1990. Wetland Determination at Chanute Air Force Base, Champaign County, Illinois Natural History Survey, Center for Biogeographic Information, 28 September.

U.S. Air Force, 1981. Land Management Plan for Chanute Force Base, Illinois, for the Plan Period July 1981 to July 1986.

U.S. Air Force, 1986a. Cropland Management Plan for Chanute Air Force Base, Illinois, for the Period October 1986 to October 1991.

U.S. Air Force, 1986b. CTTC Plan 708, Management of Hazardous Waste, Chanute Technical Training Center, Chanute AFB, Illinois, July.

U.S. Air Force, 1987a. Base Comprehensive Plan, prepared for Chanute Air Force Base, Illinois.

U.S. Air Force, 1987b. Executive Summary Comprehensive Plan for Chanute Technical Training Center.

U.S. Air Force, 1988. CTTC Plan 705 Spill Prevention and Response, Chanute Technical Training Center, Chanute AFB, Illinois, December.

U.S. Air Force, 1989a. Chanute Technical Training Center Economic Resource Impact Statement.

U.S. Air Force, 1989b. Environmental Requirements and Concerns, Based on the Announcement of the Proposed Closure of Chanute AFB, Illinois, Environmental Planning and Contract Programming Branch, February.

U.S. Air Force, 1989c. Remedial Investigation Data Summary Report, December 1987 - June 1989, Air Force Installation Restoration Program, Chanute AFB Rantoul, Illinois, October.

U.S. Air Force, 1989d. Asbestos Management Plan for Chanute AFB, Idaho National Engineering Laboratory, August.

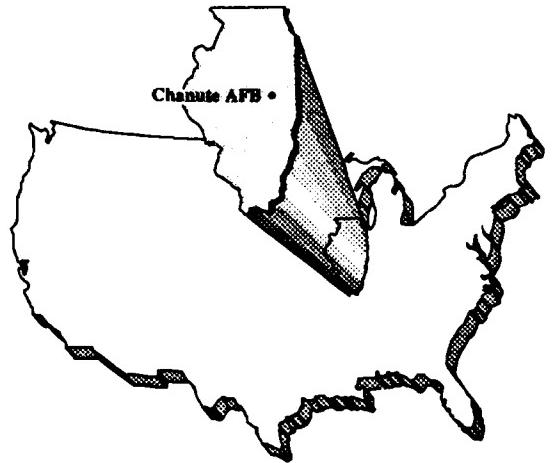
U.S. Air Force, 1990a. Airfield Pavement Evaluation of Chanute AFB, Illinois, February.

U.S. Air Force, 1990b. Draft Environmental Impact Statement Disposal and Reuse of Pease Air Force Base - New Hampshire, December.

- U.S. Air Force, 1990c. Final Environmental Impact Statement for the Closure of Chanute Air Force Base, Department of the Air Force, Headquarters Air Training Command, Randolph AFB, Texas, February.
- U.S. Air Force, 1990d. Record of Decision, Closure of Chanute AFB, March 21.
- U.S. Air Force, 1990e. Chanute AFB Economic Resource Impact Statement: FY 1989, Cost Branch, 3345 Comptroller Squadron, Chanute AFB, Illinois.
- U.S. Air Force, 1990f. Air Force Procedure for Predicting Aircraft Noise around Airbases: Noise Exposure Model (NOISEMAP) User's Manual Report, AAMRL-TR-90-011.
- U.S. Air Force, 1990g. Unpublished Historic Monthly Utility Data 1986-1990, Comptroller's Department and Base Civil Engineering, Chanute AFB, Rantoul, Illinois.
- U.S. Air Force, 1990h. Environmental Assessment for the Reactivation of Runway 18/36 at Chanute AFB, Illinois.
- U.S. Air Force, 1991a. Environmental Assessment, Disposal and Reuse of Chapman Court, Chanute AFB, February.
- U.S. Air Force, 1991b. Socioeconomic Impact Analysis Study, Disposal and Reuse of Chanute Air Force Base, Illinois.
- U.S. Army Corps of Engineers, 1987. Maintenance and Underground Drainage System Study for Chanute Air Force Base.
- U.S. Bureau of the Census, 1990. Final Population Estimates for Incorporated Places, July 1, 1988, Suitland, MD.
- U.S. Department of Agriculture, 1982. Soil Survey of Champaign County, Illinois, Soil Conservation Service.
- U.S. Department of Commerce, 1990a. Airport/Facility Directory, 3 May.
- U.S. Department of Commerce, 1990b. Chicago Sectional Aeronautical Chart, 18 October.
- U.S. Department of Commerce, 1990c. Instrument Approach Procedures, Vol 3, 18 October.
- U.S. Department of Commerce, 1990d. St. Louis Sectional Aeronautical Chart, 18 October.
- U.S. Environmental Protection Agency, 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with Adequate Margin of Safety, Report No. 550/9-74-004, March.
- U.S. Environmental Protection Agency, 1977. Guidelines for Air Quality Maintenance Planning and Analysis, Volume 10: Procedures for Evaluating Air Quality Impacts of New Stationary Sources, EPA document 450/4-77-001.
- U.S. Environmental Protection Agency, 1980. Effects of Noise on Wildlife and Other Animals: Review of Research Since 1971, EPA 550/9-80-100, U.S. Environmental Protection Agency, Washington DC.
- U.S. Environmental Protection Agency, 1985a. AP-42, Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Office of Air Quality Planning and Standards, September.
- U.S. Environmental Protection Agency, 1985b. AP-42, Compilation of Air Pollutant Emission Factors, Volume II: Mobile Sources, Motor Vehicle Emission Laboratory, September.

- U.S. Environmental Protection Agency, 1987. Industrial Complex (ISC) Dispersion Model User's Guide, Second Edition (Revised), Volume 1, document #450/4-88-0029, December.
- U.S. Fish and Wildlife Service, 1990. Letter to Lt. Col. Thomas J. Bartol, AFESC, Norton AFB, December 12.
- U.S. General Accounting Office, 1979. DOD's Commendable Initial Efforts to Solve Land Use Problems Around Airfields, LCD-78-341, January 22.
- Village of Rantoul, 1990a. Village of Rantoul, Illinois, Comprehensive Annual Financial Report, April 30, 1990, Rantoul, Illinois.
- Village of Rantoul, 1990b. Unpublished Historic Monthly Utility Data 1986-1990, Comptroller's Department, Rantoul, Illinois.
- Village of Rantoul, 1991. Rantoul Zoning Ordinance - 1991, Ordinance No. 1300.
- Visocky, A., M. Sherrill, and K. Cartwright, 1985. Geology, Hydrology, and Water Quality of the Cambrian and Ordovician Systems in Northern Illinois, Illinois State Geological Survey and Illinois State Water Survey Cooperative Groundwater Report 10.
- Wickham, J., 1979. Glacial Geology of North-Central and Western Champaign County, Illinois, Illinois State Geological Survey Circular 506.
- Willman, H. E., E. Buschbach, T.C. Collinson, C. Frye, J.C. Hopkins, M.E. Lineback, and J.A. Simon, 1975. Handbook of Illinois Stratigraphy, Illinois State Geological Survey Bulletin 95.

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APPENDICES



APPENDIX A

APPENDIX A

GLOSSARY OF TERMS AND ACRONYMS/ABBREVIATIONS

APPENDIX A

GLOSSARY OF TERMS AND ACRONYMS/ABBREVIATIONS

Appendix A consists of a glossary of terms and acronyms/abbreviations with definitions for such terms used in the Disposal and Reuse EIS for Chanute AFB.

GLOSSARY OF TERMS

2, 4-D. (2, 4-dichlorophenoxy) acetic acid - a specific (selective) organic herbicide permitting elimination of weeds without injury to crops. CAS #94-75-7.

2, 4, 5-T. (2, 4, 5 - trichlorophenoxy) acetic acid - a specific (selective) herbicide permitting elimination of weeds without injury to crops; toxic; use has been restricted. CAS #93-76-5.

A-Weighted Sound Level (dBA). A number representing the sound level which is frequency weighted according to a prescribed frequency response established by the American National Standards Institute (ANSI S1.4-1971) and accounts for the response of the human ear.

Acoustics. The science of sound which includes the generation, transmission, and effects of sound waves, both audible and inaudible.

Advisory Council on Historic Preservation. A 19-member body appointed, in part, by the President of the United States to advise the President and Congress and to coordinate the actions of federal agencies on matters relating to historic preservation, to comment on the effects of such actions on historic and archaeological cultural resources, and to perform other duties as required by law (Public Law 89-655; 16 USC 470).

Aesthetics. Referring to the perception of beauty.

Airshed. The air supply of a given area.

Ambient Air Quality Standards. Standards established on a state or federal level that define the limits for airborne concentrations of designated "criteria" pollutants (nitrogen dioxide, sulfur dioxide, carbon monoxide, total suspended particulates, ozone, and lead) to protect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility, and materials (secondary standards).

Archaeology. A scientific approach to the study of human ecology, cultural history, and cultural processes through the interpretation of material remains.

Artifact. Anything that owes its shape, form, or placement to human activity. In archaeological studies, the term is applied to portable objects (e.g., tools and the by-products of their manufacture).

Asbestos. Any one of six naturally occurring fibrous minerals found in certain types of rock formations. These minerals are mined and processed for use in industry, especially in building materials. Asbestos

fibers released into the air may be inhaled by people, and can cause health problems if sufficient quantities are inhaled.

Asbestos-containing Material. As defined by the U.S. Environmental Protection Agency, any material that contains more than 1 percent asbestos.

Aquifer. The water-bearing portion of subsurface earth material that yields or is capable of yielding useful quantities of water to wells.

Attainment Area. A region that meets the National Ambient Air Quality Standards for a criteria pollutant under the Clean Air Act.

Autoclave. A pressurized, steam-heated vessel used for the sterilization of materials to reduce the risk of infection by bacteria or viruses.

Average Annual Daily Traffic. For a one-year period, the total volume passing a point or segment of a highway facility in both directions, divided by the number of days in the year.

Avigational. Pertaining to navigation by aircraft.

Biophysical. Pertaining to the physical and biological environment, including the environmental conditions crafted by man.

Biota. The plant and animal life of a region.

Carbon Monoxide (CO). A colorless, odorless, poisonous gas produced by incomplete fossil-fuel combustion. One of the six pollutants for which there is a national ambient standard. See Criteria Pollutants.

Class I, II, and III Areas. Under the Clean Air Act, clean air areas are divided into three classes. Very little pollution increase is allowed in Class I areas, some increase in Class II areas, and more in Class III areas. National parks and wilderness areas receive mandatory Class I protection. All other areas start out as Class II. States can reclassify Class II areas up or down, subject to federal requirements.

Commission. Approval certification by the FAA and IDOT for aeronautical use as an airport.

Comprehensive Plan. A public document, usually consisting of maps, text, and supporting materials, adopted and approved by a local government legislative body, which describes future land uses, goals, and policies.

Control Zone. Controlled airspace that extends upward from the surface to 14,500 feet above mean sea level. A control zone may include one or more airports and is normally a circular area with a radius of 5 statute miles and any extensions necessary to include instrument approach and departure paths.

Corrosive. A material that has the ability to cause visible destruction of living tissue and has a destructive effect on other substances. An acid or a base.

Criteria Pollutants. The Clean Air Act required the Environmental Protection Agency to set air quality standards for common and widespread pollutants after preparing "criteria documents" summarizing

scientific knowledge on their health effects. Today there are standards in effect for six "criteria pollutants": sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), ozone (O_3), and lead (Pb).

Cultural Resources. Objects, sites, structures, buildings, districts, or any other physical remain used by humans in the past. These nonrenewable resources may be prehistoric, historic, architectural, or archival in nature.

Cumulative Impacts. The combined impacts resulting from all activities occurring concurrently at a given location.

Cytotoxic. Lethal to living cells.

Day-Night Average Sound Level (DNL). The 24-hour average-energy sound level expressed in decibels, with a 10-decibel penalty added to sound levels between 10:00 p.m. and 7:00 a.m. to account for increased annoyance due to noise during night hours.

Decibel (dB). A unit of measurement on a logarithmic scale which describes the magnitude of a particular quantity of sound pressure or power with respect to a standard reference value.

Determination of Eligibility. Finding by the Secretary of the Interior or his designee that a district, site, building, structure, or object meets the criteria for listing on the National Register of Historic Places.

Easement. A right or privilege (agreement) that a person may have on another's property.

Effluent. Wastewater discharge from a wastewater treatment facility.

Endangered Species. A species that is threatened with extinction throughout all or a significant portion of its range.

Environmental Impact Analysis Process. The process of conducting environmental studies as outlined in Air Force Regulation 19-2.

Environmental Protection Agency (EPA). The independent federal agency, established in 1970, that regulates environmental matters and oversees the implementation of environmental laws.

Frequency. The time rate (number of times per second) that the wave of sound repeats itself, or that a vibrating object repeats itself – now expressed in Hertz (Hz), formerly in cycles per second (cps).

Friable. Easily crumbled or ground into powder.

Fungicides. Any substance that kills or inhibits the growth of fungi.

Habituate. To become accustomed to frequent repetition or prolonged exposure.

Hazardous Material. Generally, a substance or mixture of substances that has the capability of either causing or significantly contributing to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or posing a substantial present or potential risk to human health or the environment. Use of these materials is regulated by Department of Transportation (DoT), Occupational Safety and Health Administration (OSHA), and Superfund Amendments Reauthorization Act (SARA).

Hazardous Waste. A waste, or combination of wastes, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Regulated under the Resource Conservation and Recovery Act (RCRA).

Heavy metals. A metal (e.g., lead, mercury, cadmium, and chromium) of atomic weight greater than sodium (a.w.-22.9 grams/molecule) that forms soaps on reaction with fatty acids.

Herbicides. A pesticide (q.v.), either organic or inorganic, used to destroy unwanted vegetation, especially various types of weeds, grasses, and woody plants.

Historic Context. An organizing structure for interpreting history that groups information about historic properties that share a common theme, common geographical area, and a common time period. The development of historic contexts is a foundation for decisions about the planning, identification, evaluation, registration, and treatment of historic properties, based upon comparative historic significance.

Historic Integrity. The unimpaired ability of a property to convey its historical significance.

Historic Property/Resource. A building, site, district, object, or structure evaluated as historically significant.

Hush House. A structure designed to suppress engine testing noise.

Hydrocarbons (HC). Any of a vast family of compounds containing hydrogen and carbon. Used loosely to include many organic compounds in various combinations; most fossil fuels are composed predominately of hydrocarbons. When hydrocarbons mix with nitrogen oxides in the presence of sunlight, ozone is formed; hydrocarbons in the atmosphere contribute to the formation of ozone.

Impacts. An assessment of the meaning of changes in all attributes being studied for a given resource; an aggregation of all the adverse effects, usually measured using a qualitative and nominally subjective technique. In this EIS, as well as in the CEQ regulations, the work impact is used synonymously with the word effects.

Infrastructure. The basic installations and facilities on which the continuance and growth of a community, state, etc., depend, e.g., roads, schools, power plants, transportations, and communication systems, etc.

Integrated Concept Plan. The combined features and ideas of the three studies (Urban Land Institute [ULI], Crawford, Murphy and Tilley, Incorporated [CMT], and EDAW, Incorporated) of alternate ways that Chanute AFB could be developed into civilian use incorporated into a single integrated land use concept.

Interstate. The designated National System of Interstate and Defense Highways located in both rural and urban areas; they connect the East and West coasts and extend from points on the Canadian border to various points on the Mexican border.

L_{eq}. The equivalent steady state sound level which in a stated period of time would contain the same acoustical energy as time-varying sound level during the same period.

L_{max}. The highest A-weighted sound level observed during a single event of any duration.

Lead (Pb). A heavy metal used in many industries, which can accumulate in the body and cause a variety of negative effects. One of the six pollutants for which there is a national ambient air quality standard. See Criteria Pollutants.

Lens. A geologic deposit bounded by converging surfaces (at least one of which is curved), thick in the middle and thinning toward the edges.

Level of Service (LOS). In transportation analyses, a qualitative measure describing operational conditions within a traffic stream and how they are perceived by motorists and/or passengers. In public services, a measure describing the amount of public services (e.g., fire protection and law enforcement services) available to community residents, generally expressed as the number of personnel providing the services per 1,000 population.

Loudness. The qualitative judgement of intensity of a sound by a human being.

Masking. The action of bringing one sound (audible when heard alone) to inaudibility or to unintelligibility by the introduction of another sound.

Mitigation. A method or action to reduce or eliminate program impacts.

MUDS Study. The Maintenance and Upgrade of Drainage Systems studies evaluate storm drainage system capacity problems and maintenance needs, and provide recommendations for major structural modifications to the system and maintenance programs.

Multiple Family Housing. Townhouse or apartment units that accommodate more than one family though each dwelling unit is only occupied by one household.

National Ambient Air Quality Standards (NAAQS). Section 109 of the Clean Air Act requires EPA to set nationwide standards, the National Ambient Air Quality Standards, for widespread air pollutants. Currently, six pollutants are regulated by primary and secondary NAAQS – carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (PM-10), and sulfur dioxide. See Criteria Pollutants.

National Priority List. A list of sites (federal and state) that contain hazardous materials that may cause an unreasonable risk to the health and safety of individuals property, or the environment.

National Register of Historic Places. A register of districts, sites, buildings, structures, and objects important in American history, architecture, archaeology, and culture, maintained by the Secretary of the Interior under authority of Section 2(b) of the Historic Sites Act of 1935 and Section 101(a)(1) of the National Historic Preservation Act of 1966, as amended.

Native Americans. Used in a collective sense to refer to individuals, bands, or tribes who trace their ancestry to indigenous populations of North America prior to Euro-American contact.

Native Vegetation. Plant life that occurs naturally in an area without agricultural or cultivational efforts. It does not include species that have been introduced from other geographical areas and become naturalized.

Nitrogen Dioxide (NO₂). Gas formed primarily from atmospheric nitrogen and oxygen when combustion takes place at high temperature. NO₂ emissions contribute to acid deposition and formation of atmosphere ozone. One of the six pollutants for which there is a national ambient standard. See Criteria Pollutants.

Nitrogen oxides (NO_x). Gases formed primarily by fuel combustion which contribute to the formation of acid rain. Hydrocarbons and nitrogen oxides combine in the presence of sunlight to form ozone, a major constituent of smog.

Noise. Any sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying (unwanted sound).

Noise Attenuation. The reduction of a noise level from a source by such means as distance, ground effects, or shielding.

Noise Contour. A curve connecting points of equal noise exposure on a map. Noise exposure is often expressed using the average day-night sound level, DNL.

Nonattainment Area. An area that has been designated by the Environmental Protection Agency or the appropriate state air quality agency, as exceeding one or more National Ambient Air Quality Standards.

Ozone (ground level). A major ingredient of smog. Ozone is produced from reactions of hydrocarbons and nitrogen oxides in the presence of sunlight and heat. Some 68 areas, mostly metropolitan areas, did not meet a December 31, 1987, deadline in the Clean Air Act for attaining the ambient air quality standard for ozone.

Paleontological Remains/Resources. Fossilized organic remains from past geologic periods.

Paleozoic. An era of geologic time extending from about 570 to about 225 million years ago.

pH. Degree of acidity or alkalinity.

Pesticides. Any substance, organic or inorganic, used to destroy or inhibit the action of plant or animal pests; the term thus includes insecticides, herbicides, rodenticides, miticides, etc. Virtually all pesticides are toxic to man to a greater or lesser degree. They vary in biodegradability.

Phenolic Compounds. Of, relating to, containing, or derived from phenol, which is a caustic, poisonous, white crystalline compound (C₆H₅OH) derived from benzene and used in resins, disinfectants, plastics, and pharmaceuticals.

Pitch. The subjective quality of a sound, which determines its position in a musical scale. Pitch depends upon the frequency of air vibrations and, therefore, upon the frequency of the vibrating source.

Polychlorinated Biphenyls (PCBs). Any of a family of industrial compounds produced by chlorination of biphenyl. These compounds are noted chiefly as an environmental pollutant that accumulates in organisms and concentrates in the food chain with resultant pathogenic and teratogenic effects. They also decompose very slowly.

Prehistoric. The period of time before the written record.

Prevention of Significant Deterioration (PSD). In the 1977 Amendments to the Clean Air Act, Congress mandated that areas with air cleaner than required by national ambient air quality standards must be protected from significant deterioration. The Clean Air Act's PSD program consists of two elements – requirements for best available control technology on major new or modified sources, and compliance with an air quality increment system.

Prevention of Significant Deterioration Area. A requirement of the Clean Air Act (160 et seq.) that limits the increases in ambient air pollutant concentrations in clean air areas to certain increments even though ambient air quality standards are met.

Primary Roads. A consolidated system of connected main roads important to regional, statewide, and interstate travel; they consist of rural arterial routes and their extensions into and through urban areas of 5,000 or more population.

Quaternary. The second period of the geologic Cenozoic Era, which began 2 to 3 million years ago and extends to the present.

Raptors. Predatory; said especially of birds of prey.

Reconstruction (runway). Removal of surface concrete. Use of old concrete as aggregate for surface coarse. Addition of new concrete to surface.

Reliever Airport. An airport that provides substantial capacity or instrument training support to a commercial service airport.

Single-Family Housing. A conventionally build house consisting of a single dwelling unit occupied by one household.

Site. As it relates to cultural/resources, any location where humans have altered the terrain or discarded artifacts.

Sludge. A heavy, slimy deposit, sediment, or mass resulting from industrial activity; solids removed from wastewater.

Solvent. A substance that dissolves or can dissolve another substance.

Sound. The auditory sensation evoked by the compression and rarefaction of the air or other transmitting medium.

State Historic Preservation Officer. The official within each state, authorized by the State at the request of the Secretary of the Interior, to act as liaison for purposes of implementing the National Historic Preservation Act.

Statute Mile. A unit of linear measure equal to 5,280 feet.

Sulfur Dioxide (SO₂). A toxic gas that is produced when fossil fuels, such as coal and oil, are burned. SO₂ is the main pollutant involved in the formation of acid rain. SO₂ also can irritate the upper respiratory tract and cause lung damage. During 1980, some 27 million tons of sulfur dioxide were emitted in the U.S.,

according the Office of Technology Assessment. The major source of SO₂ in the U.S. is coal-burning electric utilities.

Threatened Species. Plant and wildlife species likely to become endangered in the foreseeable future.

Total Suspended Particulates (TSP). The particulate matter in the ambient air. The previous national ambient air quality standard for particulates was based on TSP levels; it was replaced in 1987 by an ambient standard based on PM-10 levels.

Transition Zone. Controlled airspace designed to contain instrument flight rules operations during portions of the terminal operation and while transiting between the terminal and enroute environment.

Trichloroethylene. An organic solvent.

Unified Soil Classification System. A rapid method for identifying and grouping soils for military construction. Soils are grouped by grain-size, gradation, and liquid limit.

Wetlands. Areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil. This classification includes swamps, marshes, bogs, and similar areas.

Zoning. The division of a municipality (or county) into districts for the purpose of regulating land use, types of building, required yards, necessary off-street parking, and other prerequisites to development. Zones are generally shown on a map and the text of the zoning ordinance specifies requirements for each zoning category.

ACRONYMS/ABBREVIATIONS

AADT	Average Annual Daily Traffic
ACM	Asbestos-containing materials
ACOE	U.S. Army Corps of Engineers
AFB	Air Force Base
AGL	Above ground level
ALSF	Approach light system with sequenced flashing lights
ANSI	American National Standards Institute
ARSA	Airport Radar Service Area
ASV	Annual Service Volume
ATCT	Air Traffic Control Tower
BCRA	Base Closure and Realignment Act (Public Law 100-526)
BTEX	Benzene, toluene, ethylbenzene, and xylene
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIPS	Central Illinois Public Service Company
CO	Carbon monoxide
CTTC	Chanute Technical Training Center
dB	decibel
DERP	Defense Environmental Restoration Program
DNL	Day-night average sound level
DOD	Department of Defense
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FS	Feasibility Study
FY	fiscal year
gal	gallon
gpd	gallons per day
gpm	gallons per minute
HABS	Historic American Building Survey
HIRL	High Intensity Runway Lights
hp	horsepower
IAAQs	Illinois Ambient Air Quality Standards
ICR	Illinois Central Railroad

IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
IFR	Instrument flight rules
ILS	Instrument landing system
IMEA	Illinois Municipal Electric Authority
INM	Integrated Noise Model
IRP	Installation Restoration Program
ISCST	Industrial Source Complex Short-Term Model
kV	kilovolt
kwh	kilowatt-hour
kVA	kilovolt-ampere
LOS	Level of Service
LTO	Landing and take-off
MALSR	Medium Intensity Approach Light System - Runway Alignment Indicator Lights
MCLs	Maximum contaminant levels
MGD	Million gallons per day
MITL	Medium Intensity Taxiway Lights
MOU	Memorandum of Understanding
mph	Miles per hour
msl	mean sea level
MUDS	Maintenance and Upgrade of Drainage Systems Study
MW	megawatts
MWH	megawatt-hours
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NIGC	Northern Illinois Gas Company
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides
NPDES	National Pollution Discharge Elimination System Permit
NPIAS	National Plan of Integrated Airport Systems
NPL	National Priorities List
NRHP	National Register of Historic Places
O ₃	Ozone
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
Pb	Lead
PCBs	Polychlorinated biphenyls
pc/l	picocuries per liter
PM ₁₀	Particulate matter less than 10 microns in diameter
POLs	Petroleum, oils, and lubricants

ppb	part per billion
ppm	part per million
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
RA	Remedial Action
RAMP	Radon Assessment and Mitigation Program
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RD/RA	Remedial Design/Remediation Actions
REIL	Runway End Identification Lights
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision (presented in Appendix B of this EIS)
ROI	Region of Influence
RPZ	Runway Protection Zone
RVR	Runway Visual Range
SARA	Superfund Amendments Reauthorization Act
SCS	Soil Conservation Service
SEL	Sound exposure level
SHPO	State Historic Preservation Officer
SI	Site Inspection
SO ₂	Sulfur dioxide
STI	Speech Transmission Index
TCE	Trichloroethylene
THC	Total hydrocarbons
TRACON	Terminal Radar Approach Control (control of air traffic)
TSCA	Toxic Substances and Control Act
TSP	Total suspended particulates
µg/m ³	micrograms per cubic meter
USCS	Unified Soil Classification System
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VADI	Visual Approach Descent Indicators
VFR	Visual Flight Rules
VOCs	Volatile organic compounds
VOR	Very high frequency omnirange
VORTAC	Very high frequency Omni-Directional Range Tactical Air Navigation
WWTP	Wastewater treatment plant

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APPENDIX B

APPENDIX B

CHANUTE AFB CLOSURE EIS RECORD OF DECISION

Chanute AFB Disposal and Reuse FEIS

APPENDIX B

CHANUTE AFB CLOSURE EIS RECORD OF DECISION

The following Record of Decision for the Chanute AFB Closure EIS was formally made during March 1990 by James F. Boatright, Deputy Assistant Secretary of the Air Force (Installations). This ROD has been retyped for the purposes of reproduction and legibility in this document.

RECORD OF DECISION CLOSURE OF CHANUTE AIR FORCE BASE

The Final Environmental Impact Statement (EIS) was prepared to assess the potential environmental impacts resulting from the closure of Chanute Air Force Base (AFB). The closure is the result of the Base Closure and Realignment Act (Public Law 100-526) and recommendations of the Defense Secretary's Commission on Base Realignment and Closure. The Secretary of Defense approved those recommendations and announced that the Department of Defense would implement them. The Congress did not pass a Joint Resolution disapproving the recommendations within the time allotted by the Act. Therefore, the Act now requires the Secretary of Defense, as a matter of law, to implement those closures and realignments. The withdrawal of personnel and the closure of Chanute AFB will be implemented by relocating the mission and related support activities of the Chanute Technical Training Center to existing technical training centers at Sheppard, Keesler, Lowry and Goodfellow AFBs.

The Act also makes the Secretary of Defense responsible for management and disposal of the closed bases. Therefore, in addition to the EIS on closure of Chanute AFB, a second EIS will be prepared on the final disposition of base property. This second EIS will address potential reuse of the base and the environmental and socioeconomic implications of the various reuse opportunities. The Air Force will include in the second EIS proposals from the civilian community reuse plans.

The environmental impacts of closing Chanute AFB tend to be negligible or positive. Operation of a major installation creates environmental impacts; removal of the operation lessens them. This is not entirely true, since some activities, like the base's Fish and Wildlife Management Plan, are undertaken to enhance the environment. Also, inadequate maintenance of the property pending final disposal could create adverse impacts. In the aggregate, however, the environmental impacts of the closure are expected to be benign.

Important contributors to that assessment are the various commitments the Air Force has made to study and respond to potential problems. Although some of these commitments are legal requirements, they all are consistent with the Air Force's desire to close the base safely and carefully. Listed below is a brief summary of the major commitments made in the EIS:

- clean up and remove all PCB-contaminated devices; coordinate actions with EPA;
- survey all buildings and housing units for asbestos, hoping to finish by August 1990; develop a plan to respond to what is found;

- develop a management plan for Underground Storage Tanks (USTs) by April 1990; inventory and test all UST systems for leaks; remove leaking USTs; coordinate actions with the Illinois State Fire Marshal and EPA Region V;
- dispose of oil/water separators except those needed after closure, which will be decontaminated in accordance with state and federal requirements;
- drain above-ground bulk storage tanks and purge them of flammable gases;
- dispose of waste at the hazardous waste storage facility in accordance with an EPA and state-approved closure plan;
- initiate a radon survey; develop a mitigation plan after the results of the year-long study are obtained in 1991;
- evaluate buildings in the Old Main Base area for historic significance, both individually and as an historic district; coordinate results with the State Illinois Preservation Officer and the Advisory Council on Historic Preservation;
- continue Installation Restoration Program (IRP); investigate and remediate contaminated sites as needed for as long as needed; coordinate decisions on the clean up of contaminated sites with EPA Region V and the State of Illinois;
- award a caretaker contract to maintain the base buildings and grounds; and
- help with a solution to the impacts on Rantoul's wastewater treatment plant.

Necessarily, many of these commitments are to processes. The detailed statement of those processes will often be dependent on investigations and coordinations still in progress. Thus, the Final EIS could not always provide some of the specificity desired by commentors. The lack of specificity, however, is not an indication of a lack of interest: the Air Force is committed to a closure responsive to environmental concerns, and will work with Federal and state agencies to achieve that result.

The only significant environmental impact disclosed by the EIS is to the local wastewater treatment facility. The closure of Chanute will result in the loss of approximately 50% of the average daily flow to the treatment facility. That will greatly affect the pumping facilities, the clarifiers and packed tower reactors, the pressure and gravity piping systems, the sludge handling facilities, but will not reduce requirements for plant O&M staff. It will result in a deterioration of wastewater quality, operational difficulties, increased operating costs, and potentially hazardous conditions for the treatment facility. In summary, the loss of flow from Chanute will result in numerous operating problems, some requiring capital improvements to correct. It will also result in a 45 to 50 percent loss in revenue with almost no drop in operation and maintenance expenses.

The Village of Rantoul has yet to state its preferred approach for dealing with this problem. EPA Region V asked the Air Force to promise to implement measures which would allow the facility to continue operating properly. The Air Force cannot go so far, but we are continuing to discuss the problem with the responsible agencies and are committed to aiding in a solution. For example, the Air Force will maintain the connection to the municipal treatment plant up to five years past the closure of Chanute. This will accommodate infiltration/inflow, which is approximately 25% of the total flow. In addition, we expect that reuse of the base will help mitigate the problem.

A number of comments raised concerns about deterioration of base facilities after the base closes but before they are transferred to another party. As described above, a caretaker contract will be issued to maintain the base buildings and grounds. The caretaker responsibilities will include maintaining heating in buildings to forestall deterioration, limited ground maintenance, maintenance of the water system, and restriction of access to the base.

A concern raised in the EIS was the possible negative impact on the plant and animal habitat on Chanute AFB if the recommendations in the Fish and Wildlife Management Plan are not carried out before closure of the base. A new Fish and Wildlife Management Plan will be completed by October 1990. This plan will lay the foundation for proper management of the fish and wildlife habitat at Chanute AFB throughout the closure process. The caretaker contract will include protection of these habitats until transfer of base property to another party.

Comments also questioned whether the Air Force's commitment to the cleanup of hazardous waste sites would continue after the base closed. The Air Force's Installation Restoration Program (IRP) is a part of a larger Department of Defense program designed to identify and fully evaluate suspected contamination associated with past hazardous waste disposal practices and to control hazards to human health and the environment resulting from past operations. The IRP at Chanute will not be affected by closure. The IRP is independent of the base closure process and will continue, as needed, after the military mission has ended.

Through the IRP the Air Force will thoroughly investigate and remediate contaminated sites as needed. This cleanup will be done in accordance with DOD's worst-first priority model and will be performed with funds appropriated by Congress. The Air Force fully expects funding to be available to complete cleanup activities at Chanute AFB.

The Air Force will be responsible for on-base contamination that might be caused by Air Force activities at any stage of the closure and reuse process. No property requiring cleanup will be transferred prior to the Air Force completing required cleanup. Cleanup activities will be accomplished in accordance with Federal, state and Air Force regulations. The Air Force, EPA Region V, and the State of Illinois will be involved in decisions on the clean up of contaminated sites.

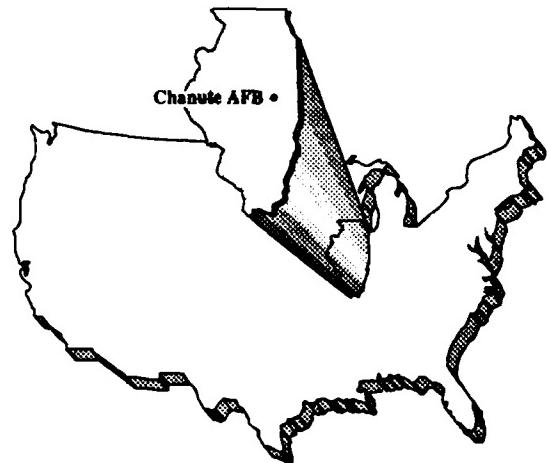
In light of all of the above, I have decided to proceed with the closure of Chanute AFB in accordance with the approaches described in the EIS and this Record of Decision.

Date

Signature

James F. Boatright
Deputy Assistant Secretary of the Air Force (Installations)

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APPENDIX C

APPENDIX C

RECORD OF NOTIFICATION

APPENDIX C **RECORD OF NOTIFICATION**

The following notice of intent was circulated and published by the Air Force in order to provide public notice of the Air Force's intent to prepare an Environmental Impact Statement of disposal and reuse of Chanute Air Force Base. This Notice of Intent has been retyped for the purposes of clarity and legibility.

**NOTICE OF INTENT
TO PREPARE ENVIRONMENTAL IMPACT STATEMENT
DISPOSAL/REUSE OF CHANUTE AFB, ILLINOIS**

The United States Air Force will prepare an Environmental Impact Statement (EIS) to assess the potential environmental impacts of disposal and reuse of the property that is now Chanute Air Force Base (AFB) in Rantoul, Illinois. On March 26, 1990 the Air Force signed a Record of Decision for closure of Chanute AFB. The Federal Aviation Administration will participate in this environmental impact analysis process as a cooperating agency.

The disposal/reuse EIS will address disposal of the property to public or private entities and the potential impacts of reuse alternatives. All available property will be disposed of in accordance with provisions of the Base Closure and Realignment Act, Public Law 100-526, and applicable federal property disposal regulations.

The Air Force is planning to conduct a scoping meeting to determine the environmental issues and concerns to be analyzed, and to solicit proposed disposal/reuse alternatives that should be addressed in the EIS. In soliciting disposal/reuse inputs, the Air Force intends to consider all reasonable alternatives offered by any Federal, state, and local government agency and any Federally-sponsored or private entity or individual with an interest in acquiring available property at Chanute AFB. These alternatives will be analyzed in the EIS. The resulting environmental impacts will be used in making disposal decisions to be documented in the Air Force's Final Disposal Plan for Chanute AFB. The meeting for this action will take place on 12 September 1990 at 7:00 p.m. in the Rantoul Civic Center, Rantoul, Illinois.

To ensure the Air Force will have sufficient time to consider public inputs on issues to be included in the disposal/reuse EIS and disposal alternatives to be included in the Final Disposal Plan, comments and reuse proposals should be forwarded to the address listed below by 28 September 1990. However, the Air Force will accept comments at the address below at any time during the environmental impact analysis process.

For further information concerning the study of Chanute AFB disposal/reuse and the EIS activities, contact

Lt. Col. Tom Bartol
AFRCE-BMS/DEV
Norton AFB, CA 92409-6448
(714) 382-4891

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APPENDIX D

APPENDIX D

FINAL ENVIRONMENTAL IMPACT STATEMENT

MAILING LIST

APPENDIX D

FINAL ENVIRONMENTAL IMPACT STATEMENT

MAILING LIST

This list of recipients includes interested federal, state and local agencies, and individuals who have expressed an interest in receiving the document. This list also includes the governor of Illinois as well as United States senators and representatives and state legislators.

ELECTED OFFICIALS

Federal Officials

U.S. Senate

The Honorable Alan J. Dixon
U.S. Senator
Attn: District Assistant

The Honorable Paul Simon
U.S. Senator
Attn: District Assistant

U.S. House of Representatives

The Honorable Edward R. Madigan
Member of Congress
Attn: Tom Perry, District Assistant

State of Illinois Officials

Governor

The Honorable Jim Edgar

State Legislature

The Honorable Timothy Johnson
Illinois State Representative, District 104

The Honorable Helen Satterthwaite
Illinois State Representative, District 103

The Honorable Stanley Weaver
Illinois State Senator, District 52

Local Officials

The Honorable Katy B. Podagrosi
Mayor of Rantoul

The Honorable Jeffrey T. Markland
Mayor of Urbana

The Honorable Dannel McColm
Mayor of Champaign

The Honorable James E. Kingston
Mayor of Paxton

Mr. Lyle Shields
Chairman, Champaign County Board

GOVERNMENT AGENCIES

Federal Agencies

Advisory Council on Historic Preservation

Assistant Secretary for Natural Resources
and Environment

U.S. Department of Agriculture
Attention: Executive Secretary
Natural Res. and Environment Committee

Mr. Philip Cohen
U.S. Department of Interior
Geological Survey, Water Resources Div.
Chief, Hydrologist

Chief, Ecology and Conservation Division
Office of Policy and Planning
National Oceanic and Atmospheric Admin.
Department of Commerce

Dr. Jonathan Deason, Director
Office of Project Review
U.S. Department of the Interior

Department of Veteran's Affairs
Attn: Mr. Allen Mauser

U.S. Department of Agriculture Soil Conservation Service	Regional Offices of Federal Agencies
U.S. Department of Energy Division of NEPA Affairs	Mr. Harry P. Blus Environmental Officer U.S. Department of Housing and Urban Development
Department of Housing and Urban Development Office of Environment and Energy	Mr. William D. Franz, Chief Environmental Review Branch (5ME-16) Planning and Management Division
Director Office of Environmental Affairs Office of the Assistant Secretary for Administration Management and Budget Dept. of Health and Human Services	U.S. Department of Interior Director, Office of Environmental Affairs
Federal Aviation Administration Director Office of Environment and Energy	Mr. Richard Nelson U.S. Department of the Interior Fish and Wildlife Service
Director U.S. Department of Education	Department of Health and Human Services Environmental Review Officer, Region V
Environmental Protection Agency Office of Federal Activities	Department of Housing and Urban Development Region V Administrator
Center for Environmental Health and Injury Control Special Programs Group (F29) Centers for Disease Control	Environmental Protection Agency Regional V Administrator
Mr. Thomas D. Larson, Administrator U.S. Dept. of Transportation Federal Highway Administration	Federal Aviation Administration Attn: Robert DeRoeck Chicago Airports Dist. Office
Office of Environmental Affairs Department of Commerce	Federal Energy Regulatory Commission Regional Engineer
Secretary of Health and Human Services Department of Health and Human Services	Corps of Engineers Rock Island District Attn: Planning Division
Mr. John Seyffert Federal Emergency Management Admin.	Mr. John Eckes U.S. Department of Agriculture Soils Conservation Service
U.S. Department of Labor Occupational Safety and Health Assistant Secretary	National Park Service Midwest Regional Office Regional Director
U.S. Department of the Interior Asst Sec. for Fish and Wildlife and Parks National Park Service	Herbert Teets, Regional Admin. U.S. Department of Transportation Federal Highway Admin.

State of Illinois Agencies

Mr. Brian Anderson
Illinois Nature Preserves

Ms. Debbie Atwood
Illinois State Clearinghouse
Office of the Governor

Ms. Rebecca Doyle, Director
Illinois Department of Agriculture

Ms. Terrence L. Barnich, Chairman
Illinois Commerce Commission

Mr. Thomas L. Armstead
Office of State Fire Marshall

Captain Harold Burcham
Illinois National Guard
183rd Civil Engineering

Mr. Steve Chard, Chief
Illinois Department of Agriculture
Bureau of Farmland Protection

Mr. Robert Clark
Dept. of Public Aid

Mr. John Cole
Illinois Dept. of Conservation

Mr. James L. Custer
State Board of Education

Ms. Ruth Dawson
IEPA, Intergovernmental Liaison

Mr. Brent Manning, Director
Illinois Dept. of Conservation

Ms. Ann Haaker
Illinois Hist. Preservation Agency

Mr. Bobby J. Hall
DCFS

Ms. Harriett Howell-Edwards
Illinois Dept. of Aging

Mr. Jan Grayson, Director
Illinois Dept. of Commerce and Community Affairs

Mr. Thomas R. Herndon
Office of the Sec. State

Mr. Theodore Hild, Chief of Staff
Preservation Services
Illinois State Hist. Preservation Agency

Illinois Natural History Survey
University of Illinois

Ms. Mary A. Gade, Director
Illinois Environmental Protection Agency

Mr. Morris Leighton, Chief
Illinois State Geological Survey

Mr. Roger C. Marquardt, Director
Illinois Department of Transportation
Division of Aeronautics

Mr. Dick Lutz
Illinois Dept. of Conservation

Ms. Joan Walters, Director
Illinois Bureau of the Budget

Mr. Tom McSwiggin
Manager, Permits Section
Division of Water Pollution Control

Mr. Dan Dees
Illinois Dept. of Transportation
Deputy Director of Planning and Programming

Mr. Richard Semonin, Chief
Illinois State Water Survey

Mr. Ronald Morse, Director
Department of Mines and Minerals

Dr. Edwin B. Silverman
Manager, Refugee Resettlement
Illinois Dept. of Public Aid

Mr. Dick St.John
Fiscal Services
Dept. of Corrections

Mr. Carl Suter
Gov. Plan. Council on Dev. Disabilities

Dr. Bernard J. Turnock, M.D., Director Illinois Dept. of Public Health	Mr. Charles Sutton Regional Office of Education
Mr. Doug Wagner Illinois Dept. of Energy and Natural Resources	Ms. Deborah Washington Northeastern Illinois Plan. Comm.
Ms. Josephine Lewis IHDA	Andrew Kulczycki, Exec. Dir. Elsis A. Womer, Case Aid Community Services Center
Local Government Agencies	
Mr. Steve Carter Champaign City Manager	Libraries
Dr. Gail Conley, Superintendent Rantoul High School Dist. 193	Champaign Public Library
Mr. David D. Glisson, Superintendent Rantoul City Schools.	Documents Library University of Illinois
Mr. James Grassman City Administrator, Urbana	Illinois State Library
Mr. Jon Johnston McLean Co. Reg. Plan. Comm.	Rantoul Public Library Attn: Susan C. Chou
Mr. Dave Kiliman Springfield-Sang. Co. Plan. Comm.	Urbana Free Library
North Central Illinois Council of Government	Department of Defense
Ms. Phyllis Moore Central Illinois Reg. Plan. Public Services	Maj. Cleve McGaughy Base Closure Project Officer HQ AMCMC-0
Captain David Morgan Commander, Dist. 10, Illinois State Police	Clint Erb Army Research Laboratory
Ms. Pat Pella Champaign Co. Reg. Plan. Comm.	Department of the Army Louisville District Corps of Engineers
Mr. Thomas E. Palzer Kankakee Co. Reg. Plan. Comm.	William R. Haynes U.S. Army Engineer Dist., Louisville
Ms. Donna Rheaume Southeastern Illinois Reg. Plan. Comm.	Wally Bishop Department of Defense Office of Economic Adjustment
Mr. Peter Herlobry Champaign County Adminstrator	Other Organizations/Individuals
	Ian R. Beste
	Mr. Harold Bodeen Secretary, Chamber of Commerce

Robert Kidd
Executive Vice President
Rantoul Area Chamber of Commerce

Marsha L. Knobioch, Director .
Champaign/Ford Vocational System

Mr. Richard McGuire
President, Urbana Chamber of Commerce

Colonel Michael W. Moore
USAF, Retired
President, Chamber of Commerce

Robin Neal
WDWS Radio

Tammy Quilen
Greater Wabash Reg.

Don Rasmus
Paxton Illinois Chamber of Commerce

John Reale

Ms. Sara Thompson
Hazardous Waste Center

Lt. General Robert F. Coverdale
USAF, Retired

Maurice S. Verplank

Mr. Michael R. Little
Sodemann and Associates, Inc

Will Hires

Kenneth L. Botts

Kent Tucker

Ellen Brin

Marge Hollenbaugh
AMAX

Dennis Potter
City of Seaside

Karen Akagi
Hand Arendall

Mary Peters
Labat Anderson, Inc.

Stephen S. Weiner
URS Consultants

Shane O'Keefe
New York City Department of General Services

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APPENDIX E

APPENDIX E

AGENCY LETTERS AND CERTIFICATIONS



U.S. Department
of Transportation
Federal Aviation
Administration

Great Lakes Region
Illinois, Indiana, Michigan,
Minnesota, North Dakota,
Ohio, South Dakota,
Wisconsin

2300 East Devon Avenue
Des Plaines, Illinois 60018

APT. ENGINEERING

December 11, 1990

DEC 13 1990

Mr. Roger H. Barcus, Chief Engineer
Illinois Department of Transportation
Division of Aeronautics
Capital Airport
Springfield, Illinois 62706

Dear Mr. Barcus:

Rantoul Airport
Rantoul, Illinois
NPIAS Revision

JVB	NCP	LTF
GPJ	EEM	HWP
TLS	MSH	JBC
PFK	KEJ	TLT
JRP	RFG	RSR
File - GEN. GEN. Proj. # ALP F4		
CSB	VIB	DMD

By this letter, the Federal Aviation Administration would like to inform you that the proposed new airport for Rantoul (No. 3-17-0136) as contained in the current National Plan of Integrated Airport Systems (NPIAS) has been designated as a general aviation reliever for O'Hare International Airport. This action was taken by our Agency in anticipation of the designation by United Airlines of making Rantoul as its maintenance hub, thereby relieving O'Hare of aircraft requiring maintenance and associated flights.

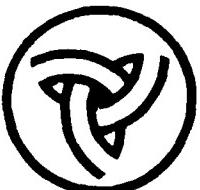
These changes to the NPIAS are effective as of this date.

We will continue to support the development of aviation at Rantoul to meet the needs of aviation.

We thank you for your continued cooperation with our office on this project.

Sincerely,

Jerry R. Mork
Community Planner
Chicago Airports District Office



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois/62764

February 21, 1991

RECEIVED FEB 22 1991

Champaign County
Chanute Air Force Base
Base Closure and Reuse Project
Off-base Project Areas 1 - 3:
 1a - Runway Protection Zone
 1b - Runway Extension Area
 2 - Unspecified Development Area
 3 - Highway Improvement Area

IHPA REVIEW

H/A _____

AC _____

AR P.H.I. aded 2/28 TW

File _____

625.5 acres Oritu

Mr. Theodore W. Hild
Deputy State Historic Preservation Officer
ATTENTION: Thomas Wolforth
 Staff Archaeologist
Illinois Historic Preservation Agency
214 South Sixth Street
Springfield, Illinois 62701

Gentlemen:

Enclosed is one copy of an Archaeological Survey Short Report (ASSR) completed by the Resource Investigation Program of the University of Illinois, Urbana-Champaign for the proposed project referenced above. A records search and Phase I cultural resource reconnaissance survey have been conducted for the project area. As indicated in the attached report no historical, architectural or archaeological sites were identified within the 625.5-acre area of potential environmental impact. Accordingly, we have determined, based upon this report, that no significant historic, architectural, or archaeological resources are located in the proposed project area.

In accordance with the established procedure for coordination of proposed Illinois Department of Transportation projects, we request the concurrence of the State Historic Preservation Officer in our determination that no significant historic properties, subject to protection under Section 106 of the National Historic Preservation Act of 1966 as amended, are located within the proposed project area.

Very truly yours,

M. J. Macchio, Engineer of
Location and Environment

J.A. Walthall
By: John A. Walthall
Cultural Resources Unit

CONCUR

By: Thomas Hild
Deputy State Historic Preservation Officer
Date: MAR - 4 1991



State of Illinois DEPARTMENT OF AGRICULTURE

Office of the Director

State Fairgrounds, P.O. Box 19281, Springfield, IL 62794-9281, 217/782-2172

October 11, 1990

Mr. Michael P. Lane, Secretary
Illinois Department of Transportation
Room 300
2300 South Dirksen Parkway
Springfield, Illinois 62764

Dear Secretary Lane:

The Illinois Department of Agriculture has examined the preliminary airport layout plan for the reuse of Chanute Air Force Base which in part delineates the site under consideration for the proposed United Airlines maintenance facility and the extension of runway 9/27. We have also extensively toured the site to gain a clear perspective of the characteristics of the site and the surrounding area. Hence, we wish to convey the following remarks.

Please be advised it is our position that utilization of the site for the maintenance facility and the runway extension would be in compliance with Illinois' Farmland Preservation Act (Ill. Rev. Stat. 1989, Ch. 5, Par. 1301-1308).

We recognize the fact that the vast majority of the soils which occupy the site are classified as prime farmland by the USDA Soil Conservation Service. However, the site is contiguous to the base and the incorporated area of Rantoul. One of the policies of Illinois' Farmland Protection Program is to guide state sponsored projects adjacent to municipal boundaries and areas which contain nonagricultural development. The intent of this policy is to preclude the random development scenario which results in needless farmland conversion. In our opinion, the development of the proposed maintenance facility and the runway extension at the subject site would conform to this policy.

In addition, during the course of the tour we noted the existence of a gas transmission line which traverses the site. The presence of infrastructure of this nature has a direct bearing on the long term agricultural viability of land. On-site utilities create an atmosphere for nonagricultural development to occur. From a land use planning viewpoint, development of land which is inhabited by utilities is preferable to the development of land that does not possess these types of appurtenances.

Secretary Lane
Page 2
October 11, 1990

Irrespective of our no objection declaration of the project site offered by the State of Illinois, it is necessary for us to express concern over other agriculture related issues that pertain to the development of the site.

In all likelihood, subsurface tile drainage systems are present on the site and on agricultural fields adjacent to the site. The potential exists that these drainage systems may actually extend from the site into the adjacent fields. Therefore, it is imperative for precautions to be taken to ensure that the integrity of all tile lines be protected. All damaged tile lines should be restored to their original condition. Otherwise, agricultural producers would experience the "ponding effect" on their fields which would be very detrimental from an economic standpoint.

Furthermore, measures to handle stormwater runoff that would be generated by impervious surfaces should be formulated. Farming operations adjacent to the site should not be the recipients of stormwater runoff from impervious surfaces that would be constructed for the project.

We encourage the Illinois Department of Transportation or other appropriate parties to consult with the Champaign County Soil and Water Conservation District relative to these drainage issues and likewise, erosion control issues that are relevant to the project. Coordination with the Champaign County SWCD during the early planning stages of the project is essential. Without question, their recommendations would be very beneficial to the project and would serve to prevent potential conflicts between the project and the agricultural environment.

The Illinois Department of Agriculture is confident that the project will be compatible with the agricultural community. Thank you for affording us the opportunity to present comments on this proposed action.

Sincerely,



John F. Rundquist, Director
Illinois Department of Agriculture

JFR:SDC:mdg



APT ENGINEERING

JUN 12 1991

STATE OF ILLINOIS

OFFICE OF THE GOVERNOR
SPRINGFIELD 62706

JIM EDGAR
GOVERNOR

June 7, 1991

JVB	NCP	LTF
GPJ	EEM	HIVP
TLS	MSH	JBC
PFK	KEJ	TLT
JRP	RFG	RSR
File - GEN. GEN. Proj. #		
CSB	VIB	DMD

Mr. Terry Schaddel
Illinois Department of Transportation
Division of Aeronautics
One Langhorne Bond Drive/Capital Airport
Springfield, Illinois 62706

Dear Mr. Schaddel:

This letter refers to Air and Water Quality Certification pursuant to section 16 (e) (1) of the Airport Act.

The Draft Environmental Impact Assessment Report (DEIAR) filed by the Illinois Department of Transportation, Division of Aeronautics, regarding the Shanute Airforce Base has been reviewed by the Environmental Protection Agency and the Illinois Department of Conservation. The review of the DEIAR indicates there is "reasonable assurance" that the project will be located, designed, constructed, and operated in compliance with applicable air and water quality standards.

Sincerely

A handwritten signature in black ink that reads "Jim Edgar".

Jim Edgar
Governor

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request June 11, 1991
Name Of Project Chanute Air Force Base - Reuse & Disposal	Proposed Land Use Major aircraft maintenance	Federal Agency Involved FAA and USAF
		County And State Champaign, Illinois
PART II (To be completed by SCS)		Date Request Received By SCS June 12, 1991
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply – do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Acres Irrigated 0	Average Farm Size 356	
Major Crop(s) Corn/Soybeans	Farmable Land In Govt. Jurisdiction Acres: 594,227 % 93.0	Amount Of Farmland As Defined In FPPA Acres: 594,227 % 93.0
Name Of Land Evaluation System Used Champaign	Name Of Local Site Assessment System Champaign	Date Land Evaluation Returned By SCS June 13, 1991
PART III (To be completed by Federal Agency)		Alternative Site Rating
A. Total Acres To Be Converted Directly	576	Site A Site B Site C Site D
B. Total Acres To Be Converted Indirectly	--	--
C. Total Acres In Site	576	231
PART IV (To be completed by SCS) Land Evaluation Information		
A. Total Acres Prime And Unique Farmland	576	231
B. Total Acres Statewide And Local Important Farmland	--	--
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.1%	.04%
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		
PART V (To be completed by SCS) Land Evaluation Criterion		
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	93.2	91.3
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points
1. % area in Ag uses 1½ mi. of site.	18	8 8
2. Land use adjacent to site.	18	16 16
3. % of site in/or suitable for Ag.	10	10 10
4. % of land zoned AG or CR 1.5 mi. fm site.	10	6 6
5. % of site zoned AG or CR.	10	10 10
6. Prior govt. actions committed site to dev.	10	10 10
7. Distance fm City or Village Corp. Limits.	10	0 0
8. Compatibility use/zoning change w/Ag uses.	10	0 0
9. Size of site feasible for farming.	8	8 8
10. Soil limitations.	10	0 0
11. Additional land	8	0 0
12. Sewage System Available	10	0 0
TOTAL SITE ASSESSMENT POINTS	200	
PART VII (To be completed by Federal Agency)		
Relative Value Of Farmland (From Part V)	100	93.2 91.3
Total Site Assessment (From Part VI above or a local site assessment)	200	70 70
TOTAL POINTS (Total of above 2 lines)	300	163.2 161.3
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Reason For Selection		
13. Central Water System	10	0 0
14. Transportation	10	0 0
15. Distance to fire protection service.	10	0 0
16. Impact on flooding/drainage.	6	2 2
17. Impact on historic, cultural, unique, etc.	6	0 0
18. Impact on recreation/open spaces.	6	0 0
19. Impact on water quality.	10	0 0
20. Impact on water supply.	10	0 0

(See instructions on reverse side)



APPENDIX F

APPENDIX F

MEMORANDUM OF UNDERSTANDING

M E M O R A N D U M O F U N D E R S T A N D I N G
A M O N G
T H E I L L I N O I S E N V I R O N M E N T A L P R O T E C T I O N A G E N C Y
T H E I L L I N O I S D E P A R T M E N T O F T R A N S P O R T A T I O N
T H E V I L L A G E O F R A N T O U L , I L L I N O I S
A N D
T H E D E P A R T M E N T O F T H E A I R F O R C E

This Memorandum of Understanding is entered into as of this 25th day of ~~Sept.~~, 1990, among the Illinois Environmental Protection Agency, Illinois Department of Transportation, Village of Rantoul, Illinois and the Department of the Air Force, hereinafter referred to as the Environmental Coordination Team.

WITNESSETH THAT:

Whereas, the Department of Defense has made the decision to close and vacate the premises of the Chanute Air Force Base and Technical Training Center at Rantoul, Illinois by 1993;

Whereas, the State of Illinois, the Village of Rantoul, the U.S. Air Force and the private sector are committed to finding an appropriate reuse for Chanute and implementing a plan for its redevelopment;

Whereas, two Environmental Impact Statements are to be prepared by the U.S. Air Force in its implementation of the Base Closure and Realignment Act of 1988, Public Law 100-526, the first completed and filed as of February 1990 and the second to be undertaken immediately;

Whereas, it is the responsibility of the U.S. Air Force to identify, assess, and remediate contamination from hazardous substances and to be protective of human health and the environment consistent with Federal and State requirements;

Whereas, the State of Illinois, Department of Transportation has been charged with the responsibility of coordinating the redevelopment efforts of the Chanute Air Force Base by Governor James R. Thompson and desires to cooperate with the U.S. Air Force in its Base Closure responsibilities;

Whereas, the State of Illinois, Environmental Protection Agency is charged with the responsibility to ensure compliance

Memorandum of Understanding
Page Two

with regulations concerning the environmental cleanup and disposal of hazardous waste within the State of Illinois including the activities involved in the environmental cleanup of the Chanute Air Force Base site;

Whereas, the Village of Rantoul desires an environmentally clean site accepted in accordance with all applicable rules and regulations to be conveyed to them or other potential tenants.

NOW, THEREFORE, the parties do mutually agree:

1. The Environmental Coordination Team will jointly and cooperatively use the abilities, expertise, manpower and facilities available to them to work toward the aggressive environmental cleanup project schedule.
2. It is further understood that the Environmental Coordination Team will work together in resolution of field problems or questions should they arise and agree to act in the best interest of the redevelopment process, consistent with prudent consideration for site safety and proper site cleanup.
3. During the development of the EIS and during the subsequent hazardous waste cleanup process, these parties agree to expedite submittals, review and approvals in order to meet a timely schedule.

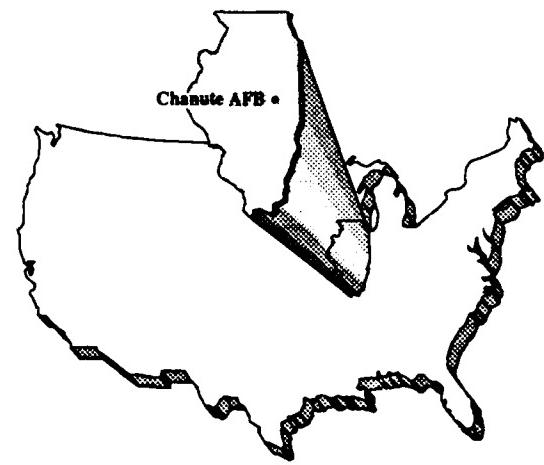
ATTEST:


Bernard P. Killian
Bernard P. Killian, Director
Illinois Environmental
Protection Agency


Michael P. Lane
Michael P. Lane, Secretary
Illinois Department of
Transportation


Katy P. Podagrosi
Katy P. Podagrosi, Mayor
Village of Rantoul


Gary Vest
Gary Vest, Deputy Assistant
Secretary of the Air Force
(Environment, Safety & Occ Health)



APPENDIX G

APPENDIX G

AIR FORCE POLICY MANAGEMENT OF ASBESTOS AT CLOSING BASES

APPENDIX G

AIR FORCE POLICY

Management of Asbestos at Closing Bases

INTRODUCTION

Asbestos in building facilities is managed because of potential adverse human health effects. Asbestos must be removed or controlled if it is in a location and condition that constitutes a health hazard or a potential health hazard or it is otherwise required by law (e.g., schools). The hazard determination must be made by a health professional (in the case of the Air Force, a Bioenvironmental Engineer) trained to make such determinations. While removal is a remedy, in many cases management alternatives (such as encapsulation within the building) are acceptable and cost effective methods of dealing with asbestos. The keys to dealing with asbestos are knowing its location and condition and having a management plan to prevent asbestos containing materials that continue to serve their intended purpose from becoming a health hazard. There is no alternative to such management, because society does not have the resources to remove and dispose of all asbestos in all buildings in the United States. Most asbestos is not now, nor will it become a health hazard if it is properly managed.

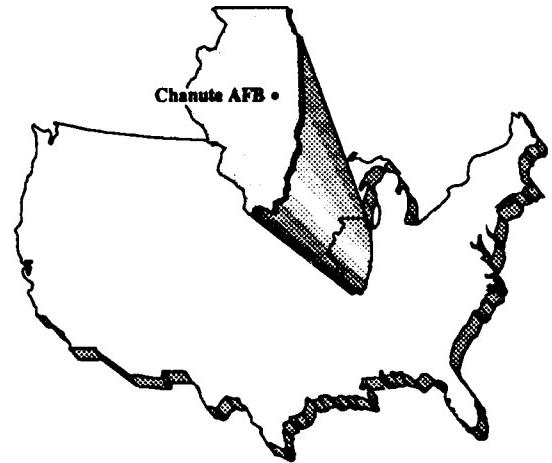
There are no laws applicable to the five closure bases that specifically mandate the removal or management of asbestos in buildings other than the law addressing asbestos in schools (P.L. 99-519). Statutory or regulatory requirements that result in removal or management of asbestos are based on human exposure or the potential for human exposure (i.e. National Emission Standards for Hazardous Air Pollutants (NESHAPS) = no visible emissions, OSHA = number of airborne fibers per cc). There are no statutory or other mandatory standards, criteria, or procedures for deciding what to do with asbestos. Thus, health professional judgement based on exposure levels or potential exposure levels must be the primary determinant of what should be done with asbestos. Apart from this professional and scientific approach, closing bases presents the additional problem of obtaining an economic return to the Government for its property. Asbestos in closing base properties must also be analyzed to determine the most prudent course in terms of removal or remediation cost and the price that can be obtained as a result.

The following specific policies will apply to bases closed or realigned (so that there are excess facilities to be sold) under the Base Closure and Realignment Act, P.L. 100-526.

1. Asbestos will be removed if:

- (a) The protection of human health as determined by the Bioenvironmental Engineer requires removal (e.g., exposed friable asbestos within a building) in accordance with applicable health laws, regulations, and standards.
- (b) A building is unsalable without removal, or removal prior to sale is cost-effective; that is, the removal cost is low enough compared to value that would be received for a "clean" building that removal is a good investment for the Government. Prior to the decision to remove asbestos solely for economic reasons, an economic analysis will be conducted to determine if demolition, removal of some types of asbestos but not others, or asbestos removal and sale would be in the best interests of the Government.
- (c) A building is, or is intended to be, used as a school or child care facility.

2. When asbestos is present but none of the above applies, the asbestos will be managed using commonly accepted standards, criteria and procedures to assure sufficient protection of human health and the environment, in accordance with applicable and developing health standards.
3. A thorough survey for asbestos (including review of facility records, visual inspection, and where appropriate as determined by the Bioenvironmental Engineer and the Base Civil Engineer, intrusive inspection) will be conducted by the Air Force prior to sale.
4. Appraisal instructions, advertisements for sale, and deeds will contain accurate descriptions of the types, quantities, locations, and condition of asbestos in any real property to be sold or otherwise transferred outside the Federal Government. Appraisals will indicate what discount the market would apply if the building were to be sold with the asbestos in place.
5. Encapsulated asbestos in a building structure, friable or not, is not regarded as hazardous waste by the Air Force, nor does encapsulation within the structure of the building constitute "storing" or "disposing of" hazardous waste. Asbestos incorporated into a building as part of the structure has not been "stored" or "disposed of."
6. Friable asbestos, or asbestos that will probably become friable, that has been stored or disposed of underground or elsewhere on the property to be sold will be properly disposed of, unless the location is a landfill or other disposal facility properly permitted for friable asbestos disposal.
7. The final Air Force determination regarding the disposition of asbestos will be dependent on the plan for disposal and any reuse of the building. Decisions will take into account the proposed community reuse plan and the economic analysis of alternatives (see para 4). The course of action to be followed with respect to asbestos at each closing installation will be analyzed in the Disposal and Reuse Environmental Impact Statement, and will be included in the record of decision (ROD). Any buildings or facilities where the proposed asbestos plan is controversial will be addressed in the ROD, whether individually or as a class of closely related facilities.
8. Since other considerations must be taken into account at bases that are continuing to operate, this policy does not apply to them, nor is it necessarily a precedent for asbestos removal policy on them.



APPENDIX H

APPENDIX H

NOISE

APPENDIX H

NOISE

1. DESCRIPTION OF PROPOSED ALTERNATIVES

Preclosure

Typical noise sources in and around airfields usually include aircraft, surface traffic, and other human activities. There has been essentially no noise generated from air traffic in the vicinity of Chanute AFB since 1971, when the airfield was closed. Thus, the preclosure reference includes no aircraft-related noise.

Rail traffic on the Illinois Central Railroad and surface traffic on local streets and highways are the existing primary sources of noise in the vicinity of Chanute AFB. The baseline surface traffic noise levels in the vicinity of the base were established in terms of day night average sound level (DNL) by modeling the arterial roadways on and near the base using current traffic and speed characteristics. The noise levels generated by surface traffic were predicted using the model published by the Federal Highway Administration (1978). The noise levels are then presented as a function of distance from the centerline of the nearest road. In airport analyses, areas with DNL above 65 dB measured in A-weighted sound levels (dBA) are considered in land use compatibility planning and impact assessment; therefore, the distances to areas with DNLs greater than 65 dBA were of particular interest.

Annual average daily traffic (AADT) data were developed from information gathered in the traffic engineering study presented in Section 3.2.4, Transportation, and were used to estimate preclosure noise levels. The traffic data used in the analysis are presented in Table H-1. The traffic mix was assumed to be 96 percent cars, 3 percent medium trucks, and 1 percent heavy trucks. Thirteen percent of the traffic was assumed to be nighttime traffic.

The rail noise levels were predicted from published models and data (Saurenman et al., 1982; Swing and Pies, 1973; Hatano, 1982). The typical rail operations for the peak season were developed from AMTRAK and Illinois Central Railroad schedules. The rail operations are summarized in Table H-2. The distances from the rail centerline to DNL 75, 70, and 65 are approximately 65 feet, 180 feet, and 435 feet, respectively. The tracks were assumed to be well maintained.

Closure Baseline

At closure, it is assumed that the airfield would still be used very infrequently and only by general aviation aircraft; therefore, the closure baseline does not include aircraft-related noise. The noise levels projected for the closure baseline were calculated using the traffic projections at base closure. The AADTs used for the analysis are presented in Table H-1. Rail traffic for the Closure Baseline was assumed to be the same as the Preclosure Reference, therefore, DNL distances would not change.

Proposed Action

The proposed action for the reuse of Chanute AFB would result in the development of a major maintenance facility and other non-aviation facilities. Primary components of the action include a medium-sized airfield,

Table H-1. Data Used in Surface Traffic Noise Analysis*

	Preclosure	Closure	Annual Average Daily Traffic (AADT)				Speed Assumed (mph)
			1994	1999	2004	2014	
Proposed Action							
U.S. 45 n/o Tanner	13,800	7,180	13,600	22,820	24,700	26,050	45
U.S. 45 s/o Tanner	10,700	5,500	8,070	11,760	12,510	13,050	55
Maplewood Dr.	8,700	2,400	9,770	15,120	16,060	16,740	35
Chandler Rd.	125	125	4,140	5,650	5,840	5,980	30
Township Rd. 1800	325	325	8,790	10,290	10,290	10,290	30
Minor Aircraft Maintenance							
Operations Alternative							
U.S. 45 n/o Tanner	13,800	7,180	11,390	17,710	20,820	25,900	45
U.S. 45 s/o Tanner	10,700	5,500	7,198	9,710	10,960	12,990	55
Maplewood Dr.	8,700	2,400	4,570	7,660	9,220	11,760	35
Chandler Rd.	125	125	5,500	1,180	1,990	2,000	30
Township Rd. 1800	325	325	325	325	325	325	30
Non-Aviation Alternative							
U.S. 45 n/o Tanner	13,800	7,180	8,360	10,540	12,750	15,110	45
U.S. 45 s/o Tanner	10,700	5,500	5,974	6,840	7,730	8,670	55
Maplewood Dr.	8,700	2,400	2,990	4,080	5,190	6,360	35
Chandler Rd.	125	125	250	470	690	920	30
Township Rd. 1800	325	325	325	325	325	325	30

*The traffic mix was assumed to be 96 percent cars, 3 percent medium trucks, and 1 percent heavy trucks.

Peak-hour traffic was assumed to be 10 percent of the ADT. Thirteen percent of the traffic was assumed to occur at night.

Table H-2. Assumed Rail Operations on the Illinois Central Railroad at Rantoul, Illinois

Train Type	Direction	Time	Number of Locomotives	Number of Cars	Speed (mph)
Freight	Southbound	0630	3	100	40
	Southbound	1700	3	100	40
	Northbound	0300	3	100	40
	Northbound	0145	3	100	40
	Madeup	0100	3	100	20
	Madeup	2100-0100	1	25	20
	Madeup	2100-0100	2	0	Idle
Amtrak	Southbound	2100	1	7	40
	Southbound	1815	1	7	40
	Northbound	0745	1	7	40
	Northbound	1900	1	7	40

Source: Illinois Central Railroad and AMTRAK.

aviation support areas, small cargo operations, maintenance operations, general aviation operations, education and training areas, medical, industrial, commercial, recreational, and residential areas.

Airport layout would remain unchanged for the most part. The existing East-West runway (09/27) would be extended by 3,700 feet to 10,000 feet to accommodate aircraft loaded for air cargo operations. Runway 09/27 would accommodate all of the proposed maintenance and air cargo operations and most of the general aviation operations. The 4,700 foot North-South runway (18/36) would be lengthened to 5,000 feet and would be used only by general aviation when wind direction requires it. The two diagonal runways would not be used as runways.

Aviation operational projections were provided by Illinois Department of Transportation (IDOT). The fleet mix and annual operations for each of the modeled years are contained in Table H-3. The proposed flight operations are shown in Tables H-4 through H-7 for 1994, 1999, 2004, and 2014, respectively. The proposed flight tracks modeled are shown in Figure H-1. The aircraft operations for each runway were based upon information provided by IDOT. Maintenance and air cargo operations are westbound 75 percent and eastbound 25 percent of the time. No touch-and-go operations for maintenance and air cargo operations are assumed. Twenty percent of these operations would take place during daytime hours. Air cargo operations were assumed to be stage length 3 and maintenance operations were assumed to be stage length 1. Engine runup operations were assumed to occur at a location shown in Figure H-2. Runups are estimated to occur once during each 24-hour period during the day (7 a.m. to 10 p.m.) for 1999 and 1.6 times per 24-hour period for 1999, 2004, and 2014. It is assumed that Boeing 737-300 type engines would be run for 20 minutes at idle power and 5 minutes at departure power. It was assumed that no noise suppression facilities would be available. The aircraft were assumed to face eastward.

General aviation operations were divided into four types:

- Single-engine (COMSEP) - A composite single engine propeller plane was modeled.
- Multi-engine (BEC58P) - Beech Baron 58P assumed to be a typical multi-engine propeller plane.
- Turboprop (CNA441) - Cessna Conquest II assumed to be a typical turboprop.
- Turbofan (CNA500) - Cessna Citation I assumed to be a typical turbofan.

The usage by runway was provided by IDOT and was determined from wind rose data. The percent usage was: 41 percent on Runway 9, 47 percent on Runway 27, 8 percent on Runway 18, and 4 percent on Runway 36.

Furthermore, 95 percent of all general aviation operations would be conducted during daytime hours (7 a.m. to 10 p.m.) and 5 percent during nighttime hours (10 p.m. to 7 a.m.). Only the single-engine aircraft would be expected to perform touch-and-go operations and these would be performed only during daytime hours. Standard glide slopes and takeoff profiles provided by the FAA's Integrated Noise Model were assumed.

Surface traffic data used in the modeling were provided by IDOT; the project traffic study presented in the EIS (Section 3.2.4) was used. Both are shown in Table H-1. Rail traffic for the Proposed Action was assumed to be the same as the Preclosure Reference and the DNL distances given in Section 3.4.4, Noise, would not change.

Table H-3. Projected Flight Operations - Proposed Action

Year	Operation	Fleet Mix	Annual Operations
1994	Major Maintenance	45% B-737-300 45% B-757-200 5% B-767-200 5% B-747-400	1,600
	Air Cargo	100% DC-9-30	730
	General Aviation	69% Single Engine 16% Multi Engine 8% Turbo Prop 7% Turbo Fan	6,940 1,600 730 <u>730</u>
			TOTAL 12,330
1999	Major Maintenance	Same as 1994	2,600
	Air Cargo	100% B-727-200 (Re-engined Stage III)	730
	General Aviation	66% Single Engine 19% Multi Engine 8% Turbo Prop 7% Turbo Fan	9,900 2,850 1,200 <u>1,095</u>
			TOTAL 18,375
2004	Major Maintenance	Same as 1994	2,600
	Air Cargo	100% B-757-200	730
	General Aviation	63% Single Engine 20% Multi Engine 9% Turbo Prop 8% Turbo Fan	10,710 3,400 1,520 <u>1,460</u>
			TOTAL 20,420
2014	Major Maintenance	Same as 1994	2,600
	Air Cargo	Same as 2004	1,460
	General Aviation	61% Single Engine 21% Multi Engine 10% Turbo Prop 8% Turbo Fan	11,468 3,948 1,880 <u>1,504</u>
			TOTAL 22,860

Table H-4. Number of Operations 1994 - Proposed Action

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL		
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Aircraft Maintenance																			
B-737-300	0.30	1.18	0.10	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.58
B-757-200	0.30	1.18	0.10	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.58
B-767-200	0.03	0.13	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18
B-747-400	0.03	0.13	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18
Air Cargo																			
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-8-30	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
General Aviation																			
COMSEP	5.66	0.30	4.94	0.26	0.96	0.05	0.48	0.03	1.90	0.00	1.90	0.00	1.27	0.00	1.27	0.00	18.38	6.63	
BEC38P	1.96	0.10	1.71	0.09	0.33	0.02	0.17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.16	2.22	
CNA441	0.69	0.06	0.78	0.04	0.15	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.10	
CNA500	0.69	0.06	0.78	0.04	0.15	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.10	
TOTALS	10.36	4.33	8.52	1.71	1.80	0.06	0.04	0.00	1.90	0.00	1.90	0.00	1.27	0.00	1.27	0.00	27.62	6.16	

Table H-5. Number of Operations 1999 - Proposed Action

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aircraft Maintenance																		
B-737-300	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	2.56
B-757-200	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	2.56
B-767-200	0.06	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
B-747-400	0.06	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
Air Cargo																		
B-727-200	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
B-757-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation																		
COMSEP	0.07	0.42	7.04	0.37	1.37	0.07	0.69	0.04	2.71	0.00	2.71	0.00	1.81	0.00	1.81	0.00	26.22	9.00
BECSEP	3.49	0.18	3.04	0.16	0.59	0.03	0.30	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42	3.39
CNA441	1.47	0.08	1.28	0.07	0.25	0.01	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	1.16
CNA500	1.34	0.07	1.17	0.06	0.23	0.01	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	0.15
TOTALS	15.74	6.23	12.99	2.48	2.45	0.13	1.22	0.08	2.71	0.00	2.71	0.00	1.81	0.00	1.81	0.00	41.43	8.91

Table H-6. Number of Operations 2004 - Proposed Action

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aircraft Maintenance																		
B-737-300	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	2.56
B-757-200	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	2.56
B-767-200	0.05	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
B-747-400	0.05	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
Air Cargo																		
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
DC-8-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation																		
COMSEP	8.73	0.46	7.82	0.40	1.49	0.08	0.74	0.04	2.93	0.00	2.93	0.00	1.96	0.00	1.96	0.00	28.36	0.98
BECSP	4.16	0.22	3.63	0.19	0.71	0.04	0.35	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.85	0.47
CNA441	1.87	0.10	1.83	0.09	0.32	0.02	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.98	0.21
CNA500	1.79	0.09	1.56	0.08	0.30	0.02	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	0.20
TOTALS	17.02	6.35	14.89	2.58	2.82	0.15	1.41	0.07	2.93	0.00	2.93	0.00	1.96	0.00	1.96	0.00	46.82	9.15

Table H-7. Number of Operations 2014 - Proposed Action

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aircraft Maintenance																		
B-737-300	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56
B-757-200	0.48	1.92	0.16	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56
B-767-200	0.05	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
B-747-400	0.06	0.21	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.28
Air Cargo																		
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	0.60	2.40	0.20	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.20
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation																		
COMSEP	9.35	0.49	8.16	0.43	1.59	0.08	0.80	0.04	3.14	0.00	3.14	0.00	2.09	0.00	2.09	0.00	30.37	1.05
BEC58P	4.83	0.25	4.21	0.22	0.82	0.04	0.41	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.28	0.54
CNA441	2.30	0.12	2.01	0.11	0.39	0.02	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.89	0.26
CNA500	1.84	0.10	1.60	0.08	0.31	0.02	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.91	0.21
TOTALS	19.99	7.64	16.54	3.07	3.12	0.16	1.56	0.08	3.14	0.00	3.14	0.00	2.09	0.00	2.09	0.00	51.68	10.95

Flight Tracks-Aviation Alternatives

Chanute AFB Rantoul, Illinois

EXPLANATION

T/G Flight Track Identifier
 — Flight Track

- | LAND USE | |
|----------|--------------------------------------|
| ① | Airfield |
| ② | Aviation Support |
| ③ | Institutional (Educational/Training) |
| ④ | Industrial |
| ⑤ | Institutional (Medical) |
| ⑥ | Commercial |
| ⑦ | Public/Recreation |
| ⑧ | Residential |
| ⑨ | Agriculture |
| Dash-dot | Base Boundary |
| ■ | Village of Rantoul |

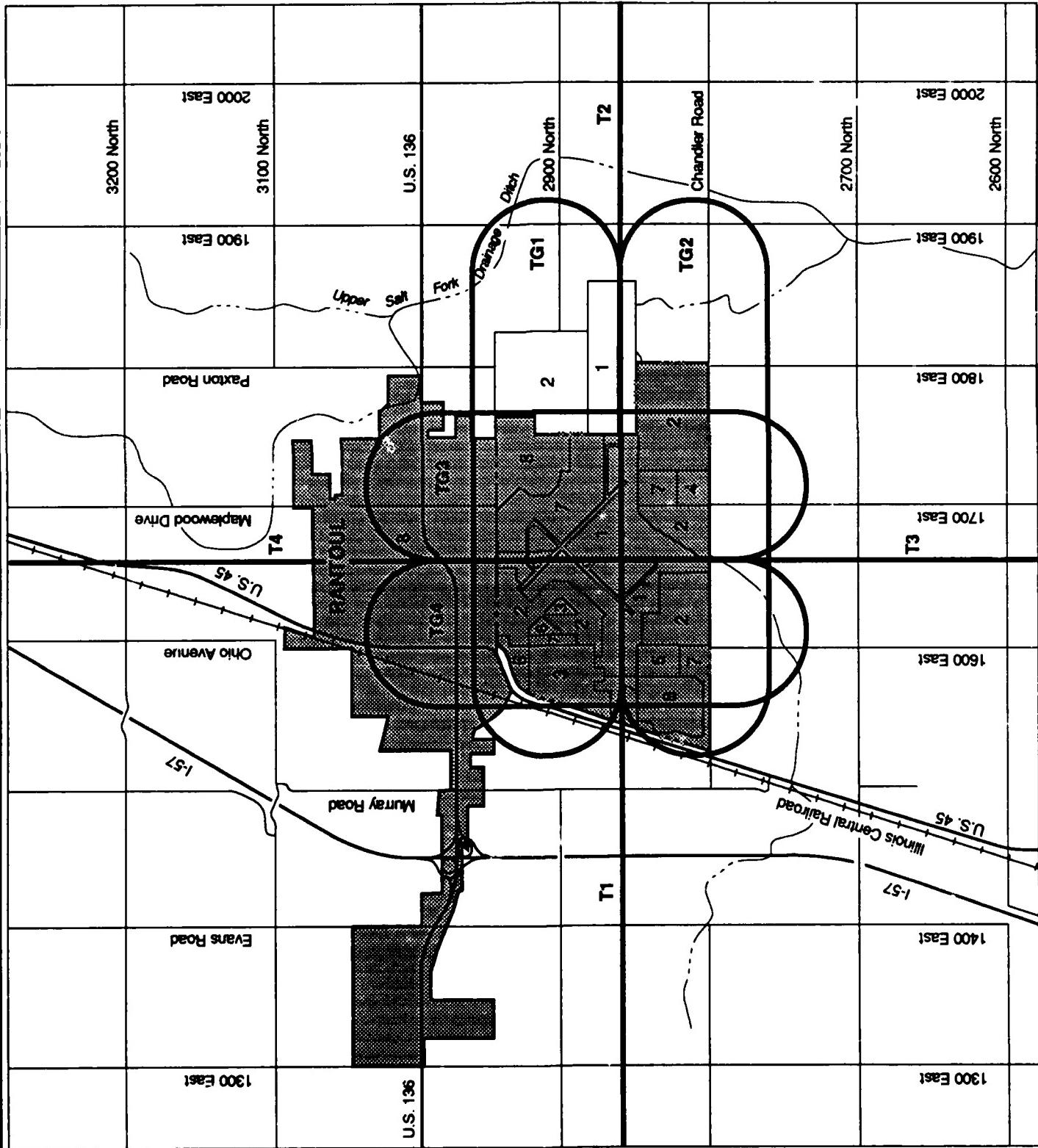
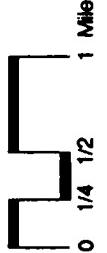


Figure H-1

Engine Run-Ups

Chanute AFB Rantoul, Illinois

EXPLANATION

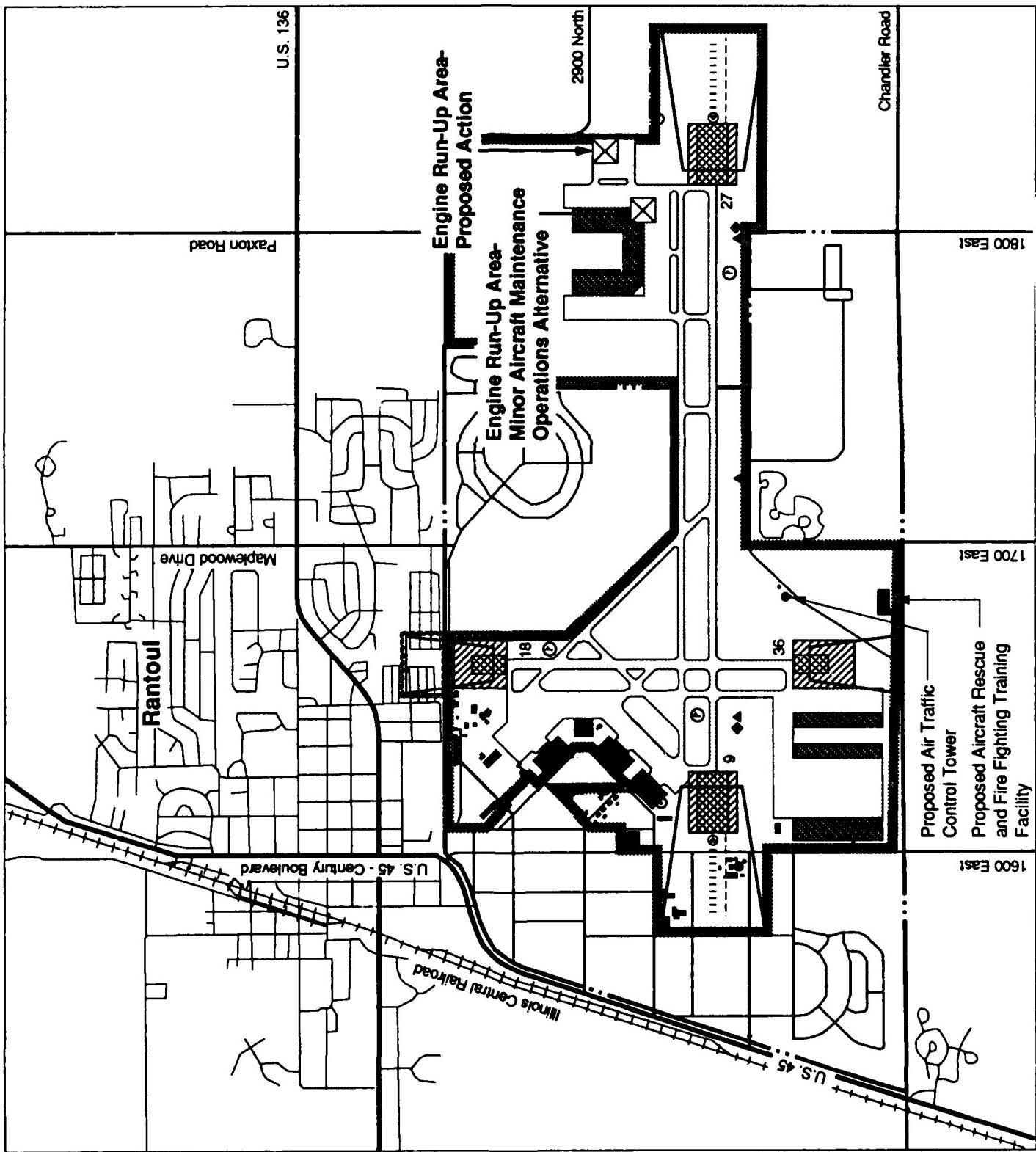
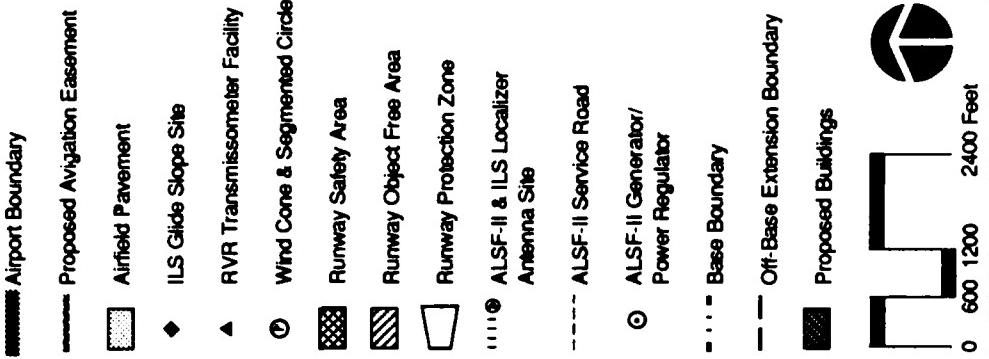


Figure H-2

Minor Aircraft Maintenance Operations Alternative

This alternative is similar to the Proposed Action in that it combines air cargo and aircraft maintenance operations. The difference between this alternative and the Proposed Action is in the amount of aircraft maintenance operations. The number of cargo and general aviation operations remain the same as in the Proposed Action. The fleet mix and annual operations for each of the modeled years are contained in Table H-8. The proposed flight operations are shown in Tables H-9 through H-12. The percent distribution of operations by runway would be the same as the Proposed Action. Engine runup operations were assumed to occur at a location shown in Figure H-2. Runups would occur once during each week for 1994, 1.7 times per week in 1999, twice per week for 2004, and 2.3 times per week in 2014. Runups would occur during the daytime. It is assumed that Boeing 737-300 or 757-200 type engines would be run for 20 minutes at idle power and 5 minutes at departure power. It was assumed that no noise suppression facilities would be available. The aircraft were assumed to face eastward.

Surface traffic data for this alternative are shown in Table H-1. Rail traffic for the Minor Aircraft Maintenance Alternative was assumed to be the same as the Preclosure Reference and the DNL distances would not change.

Non-Aviation Alternative

This alternative includes only non-aviation land uses. The focal point of the Non-Aviation Alternative is a large industrial land use zone and educational/training land use zone. The existing airfield would remain inactive and the open areas around the airfield and in the south portion of the base property would be used for agricultural purposes. Components of this alternative include industrial areas with capabilities to support warehouse, storage and truck maintenance activities, education and training areas, agriculture areas, medical, commercial, recreation, and residential areas.

Surface traffic data for this alternative are also shown in Table H-1. Rail traffic for the Non-Aviation Alternative was assumed to be the same as the Preclosure Reference and the DNL distances would not change.

No-Action Alternative

The No-Action Alternative under the disposal and reuse for Chanute AFB would result in the Air Force retaining ownership of the property after closure. The property would not be put to further use. The base would be preserved, i.e., placed in a condition intended to minimize deterioration. A caretaker would be provided to ensure base security and maintain the grounds and physical assets, including the existing utilities and structures. There would be no military activities/missions performed on the property.

2. NOISE METRICS

Noise, as used in this context, refers to sound pressure variations audible to the ear. The audibility of a sound depends on the amplitude and frequency of the sound and the individual's capability to hear the sound. Whether the sound is judged as noise depends largely on the listener's current activity and attitude toward the sound source as well as the amplitude and frequency of the sound. The range in sound pressures which the human ear can comfortably detect, encompasses a wide range of amplitudes, typically

Table H-8. Projected Flight Operations Minor Aircraft Operations Maintenance Alternative

Year	Operation	Fleet Mix	Annual Operations
1994	Minor Maintenance	45% B-737-300 45% B-757-200 5% B-767-200 5% B-747-400	300
	Air Cargo	100% DC-9-30	730
	General Aviation	69% Single Engine 16% Multi Engine 8% Turbo Prop 7% Turbo Fan	6,940 1,600 730 730 TOTAL
			<u>11,030</u>
1999	Minor Maintenance	Same as 1994	500
	Air Cargo	100% B-727-200 (Re-engined Stage III)	730
	General Aviation	66% Single Engine 19% Multi Engine 8% Turbo Prop 7% Turbo Fan	9,900 2,850 1,200 1,095 TOTAL
			<u>16,275</u>
2004	Minor Maintenance	Same as 1994	600
	Air Cargo	100% B-757-200	730
	General Aviation	63% Single Engine 20% Multi Engine 9% Turbo Prop 8% Turbo Fan	10,710 3,400 1,520 1,460 TOTAL
			<u>18,420</u>
2014	Minor Maintenance	Same as 1994	700
	Air Cargo	Same as 2004	1,460
	General Aviation	61% Single Engine 21% Multi Engine 10% Turbo Prop 8% Turbo Fan	11,468 3,948 1,880 1,504 TOTAL
			<u>20,960</u>

Table H-9. Number of Operations 1994 - Minor Aircraft Maintenance Operations Alternative

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aircraft Maintenance																		
B-737-300	0.08	0.22	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.30
B-737-200	0.06	0.22	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.30
B-767-200	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
B-747-400	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
Air Cargo																		
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-737-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
General Aviation																		
COMSEP	5.68	0.30	4.94	0.26	0.96	0.07	0.48	0.03	1.90	0.00	1.90	0.00	1.27	0.00	1.27	0.00	16.33	0.63
BECSEP	1.98	0.10	1.71	0.09	0.33	0.02	0.17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.16	0.22
CNA441	0.89	0.06	0.78	0.04	0.15	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.10
CNA500	0.89	0.06	0.78	0.04	0.15	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.10
TOTALS	9.83	2.19	8.34	1.00	1.60	0.06	0.80	0.04	1.90	0.00	1.90	0.00	1.27	0.00	1.27	0.00	26.91	3.31

Table H-10. Number of Operations 1999 - Minor Aircraft Maintenance Operations Alternative

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aircraft Maintenance																		
B-737-300	0.08	0.37	0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.49
B-757-200	0.09	0.37	0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.49
B-767-200	0.01	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.05
B-747-400	0.01	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.05
Air Cargo																		
B-727-200	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
B-757-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-8-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation																		
COMSEP	8.07	0.42	7.04	0.37	1.37	0.07	0.69	0.04	2.71	0.00	2.71	0.00	1.81	0.00	1.81	0.00	26.22	9.00
BEC58P	3.49	0.18	3.04	0.16	0.59	0.03	0.30	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.42	3.39
CNA441	1.47	0.08	1.28	0.07	0.25	0.01	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	0.16
CNA500	1.34	0.07	1.17	0.06	0.23	0.01	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	0.15
TOTALS	14.87	2.78	12.70	1.33	2.45	0.13	1.22	0.06	2.71	0.00	2.71	0.00	1.81	0.00	1.81	0.00	40.28	4.30

Table H-11. Number of Operations 2004 - Minor Aircraft Maintenance Operations Alternative

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL		
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Aircraft Maintenance																			
B-737-300	0.11	0.44	0.04	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.59
B-757-200	0.11	0.44	0.04	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.59
B-767-200	0.01	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07
B-747-400	0.01	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07
Air Cargo																			
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	0.30	1.20	0.10	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.60
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Aviation																			
COMSEP	8.73	0.46	7.62	0.40	1.49	0.08	0.74	0.04	2.93	0.00	2.93	0.00	1.96	0.00	1.96	0.00	28.36	0.98	
BEC38P	4.16	0.22	3.63	0.19	0.71	0.04	0.35	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.85	0.47	
CNA441	1.87	0.10	1.63	0.06	0.32	0.02	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.98	0.21	
CNA500	1.79	0.09	1.56	0.06	0.30	0.02	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	0.20	
TOTALS	17.10	3.06	14.62	1.49	2.82	0.15	1.41	0.07	2.93	0.00	2.93	0.00	1.96	0.00	1.96	0.00	45.72	4.77	

Table H-12. Number of Operations 2014 - Minor Aircraft Maintenance Operations Alternative

NOTE: Values are Total number of Operations (Divide in half to get number of Take-Offs and Landings)

Type of Aircraft	Track 1		Track 2		Track 3		Track 4		Touch & Go 1		Touch & Go 2		Touch & Go 3		Touch & Go 4		TOTAL		
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Aircraft Maintenance																			
B-737-300	0.13	0.52	0.04	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.69	
B-757-200	0.13	0.52	0.04	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.69	
B-767-200	0.01	0.08	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	
B-747-400	0.01	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	
Air Cargo																			
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
B-757-200	0.60	2.40	0.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	3.20	
DC-8-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
General Aviation																			
COMSEP	9.35	0.49	8.16	0.43	1.59	0.08	0.80	0.04	3.14	0.00	3.14	0.00	2.09	0.00	2.09	0.00	30.37	1.05	
BECSEP	4.83	0.25	4.21	0.22	0.82	0.04	0.41	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.28	0.54
CNA441	2.30	0.12	2.01	0.11	0.39	0.02	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.89	0.26	
CNA500	1.84	0.10	1.60	0.08	0.31	0.02	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.91	0.21	
TOTALS	19.21	4.51	16.28	2.02	3.12	0.16	1.56	0.08	3.14	0.00	3.14	0.00	2.09	0.00	2.09	0.00	50.84	6.79	

a factor larger than a million. To obtain convenient measurements and sensitivities at extremely low and high sound pressures, sound is measured in units of the decibel (dB). The dB is a dimensionless unit related to the logarithm of the ratio of the measured level to a reference level. Table H-13 shows typical dB levels for various sources in urban environments.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly. However, the following shortcut method can be used to combine sound levels:

Difference between two dB values	Add the following to the higher level
0 to 1	3
2 to 3	2
4 to 9	1
10 or more	0

The ear is not equally sensitive at all frequencies of sound. At low frequencies, characterized as a rumble or roar, the ear is not very sensitive while at higher frequencies, characterized as a screech or a whine, the ear is most sensitive. The A-weighted sound level denoted as dBA was developed to measure and report sound levels in a way which would more closely approach how we perceive the sound. All sound levels reported herein are in terms of A-weighted sound levels.

Environmental sound levels typically vary with time. This is especially true for areas near airports where noise levels will increase substantially as the aircraft passes overhead and diminish to typical community levels. The Department of Defense has specified three noise metrics to describe aviation noise. For civil airport development actions, FAA requires use of the DNL noise metric.

Maximum Sound Level: The highest A-weighted sound level observed during a single noise event no matter how long the sound may persist (see Table H-14).

Sound Exposure Level (SEL): The SEL value represents the A-weighted sound level integrated over the entire duration of the event and referenced to a duration of one second. Hence, it normalizes the event to a one second event. Typically most events (aircraft flyover) last longer than one second and the SEL value will be higher than the maximum sound level of the event. Figure H-14 indicates the relationship between the maximum sound level and SEL.

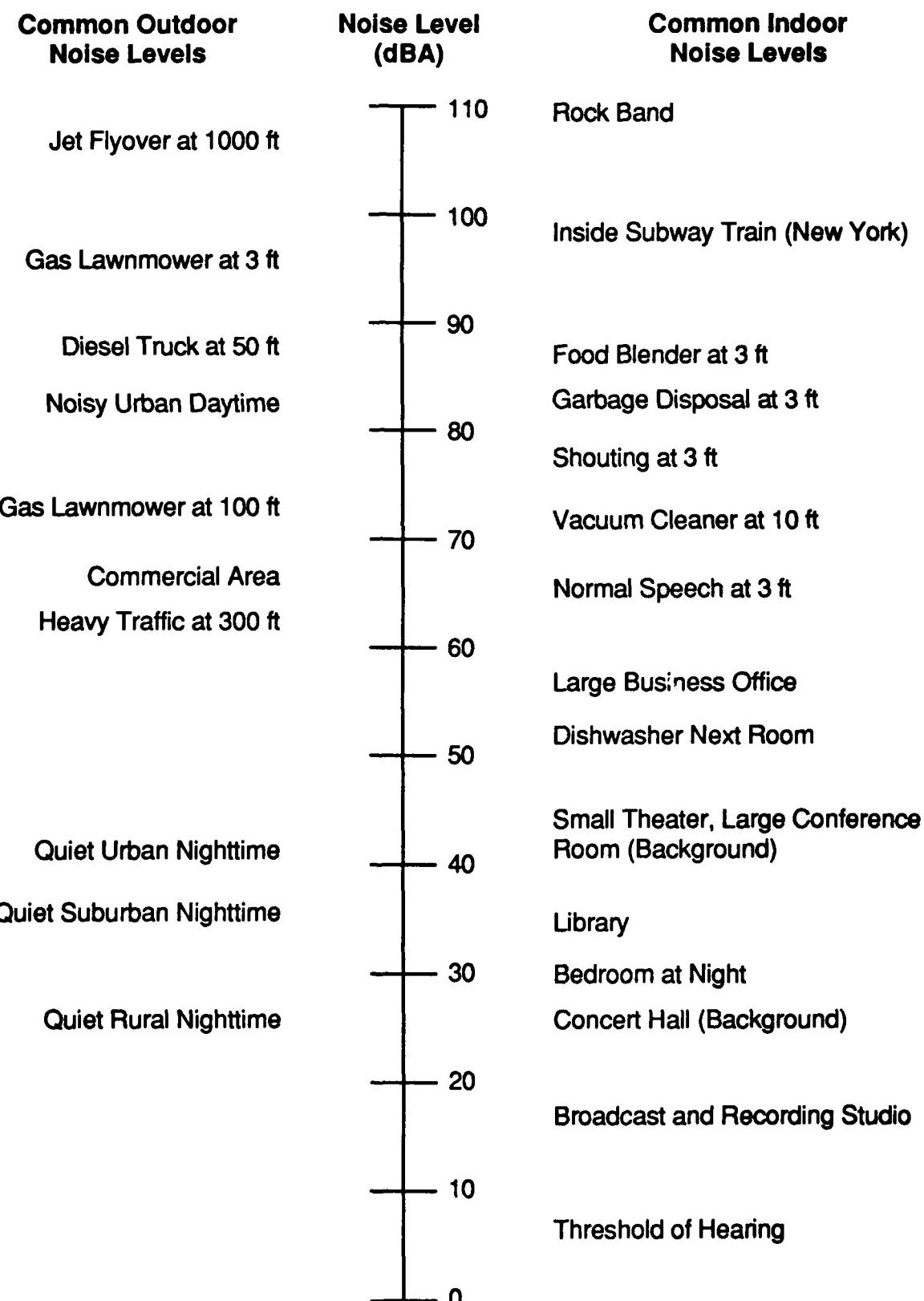
Day-Night Average Sound Level (DNL): The DNL is the 24-hour energy average A-weighted sound level with a 10 dB weighting added to those levels occurring between 10 p.m. and 7 a.m. the following morning. The 10 dB weighting is a penalty representing the added intrusiveness of noise during normal sleeping hours. DNL is used to determine land use compatibility to noise from aircraft and surface traffic.

3. NOISE MODELS

Surface Traffic

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Noise Model was used to predict surface traffic noise. The model uses traffic volumes, vehicular mix, traffic speed, traffic distribution and road way length to estimate traffic noise levels.

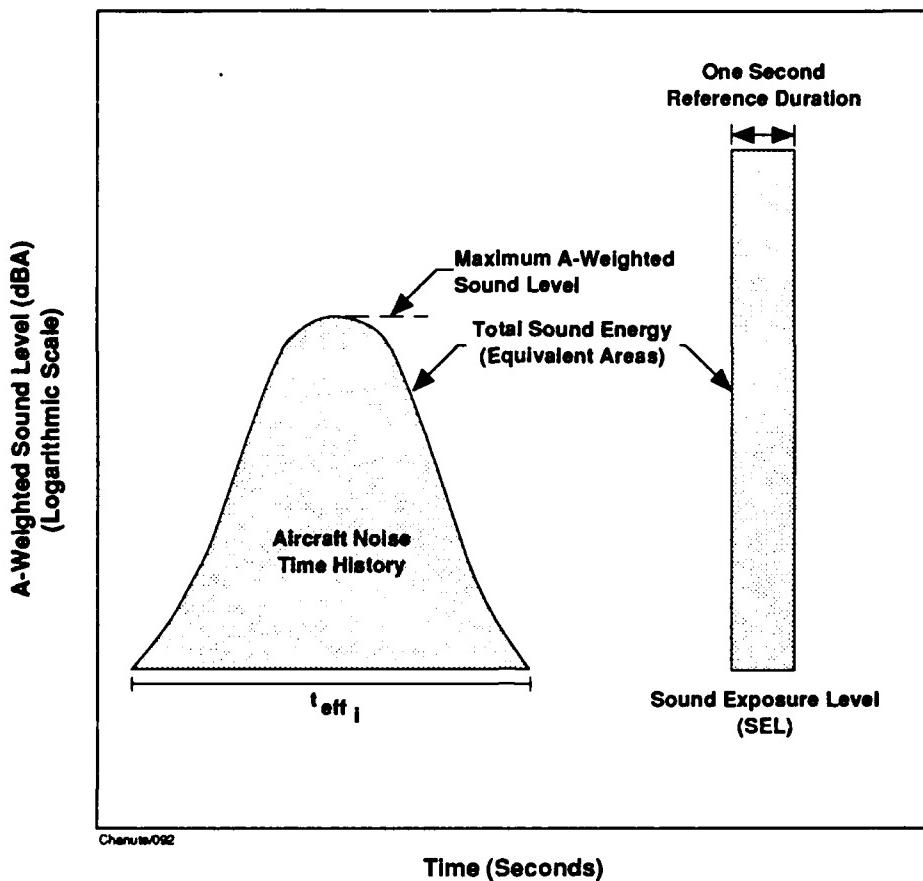
Table H-13 Comparative Sound Levels



Source: Acentech 1990

Chanute083 EIS

Table H-14. Sound Exposure Level (SEL)



Air Traffic

Version 3.9 of the Integrated Noise Model (INM) and Version 6.0 of NOISEMAP was used to predict aircraft noise levels. The INM was developed by the Federal Aviation Administration (1982) as a tool for evaluating noise impacts at and around airports. The model provides noise impacts in terms of contours of equal noise exposure. The model is supplied with a standard data base of individual aircraft noise and performance for commercial, general aviation, and some military aircraft. The program requires specific input data, consisting of runway layout, aircraft types, number of operations and flight tracks.

The Noise Exposure Map (NOISEMAP) computer model was used to compute the noise levels resulting from engine runups. Since the early 1970s, the Department of Defense has been actively developing and refining the NOISEMAP program and its associated data base. The NOISEMAP computer program is a comprehensive set of computer routines for calculating noise contours from aircraft flight and ground runup operations, using aircraft-unique noise data for both fixed and rotary-wing aircraft. The program requires specific input data, consisting of runway layout, aircraft types, number of operations, flight tracks, and noise performance data, to compute a grid of DNL values at uniform intervals. The grid is then processed by a contouring program which draws the contours at selected intervals.

4. ASSESSMENT CRITERIA

Criteria for assessing the effects of noise include annoyance, speech interference, sleep disturbance, noise-induced hearing loss, possible non-auditory health effects, reaction by animals, and land use compatibility. These criteria are often developed using statistical methods. The validity of generalizing statistics devised from large populations are suspect when applied to small sample sizes as we have in the affected areas near Chanute AFB. Caution should be employed when interpreting the results of the impact analysis. There are no accepted criteria for assessing impacts on animals.

Annoyance Due to Subsonic Aircraft Noise

Noise-induced annoyance is an attitude: a covert mental process with both acoustic and non-acoustic determinants (Fidell et al., 1988). Noise-induced annoyance is not a behavior (such as a complaint, which may or may not be motivated by annoyance), nor is it a simple and immediate sensation like loudness, free of cognitive and emotional influences. Annoyance differs from loudness (the subjective magnitude of a sound) in several ways; most importantly, annoyance grows in direct proportion to the duration of exposure, whereas loudness is insensitive to signal duration beyond about a quarter of a second. Furthermore, while loudness is directly tied to ongoing exposure, the annoyance of multiple noise intrusions waxes and wanes over periods of weeks and months. Formal definitions of noise-induced annoyance tend to be either very broad or unhelpfully specific. Annoyance is perhaps most often defined as a generalized adverse attitude toward noise exposure. Noise annoyance is affected by many factors including sleep and speech interference and task interruption.

Among the many non-acoustic factors that some researchers have suggested affect the prevalence of annoyance in communities are various attitudes toward noise sources and their operators (fear, malfeasance, distrust, etc.), socioeconomic levels of individuals, and economic dependence on operation of noise sources. The term response bias can be applied to all of these. The prevalence of annoyance in different communities may reflect differences in response bias as much as differences in exposure. Two communities in which 20 percent of the residents describe themselves as highly annoyed can have quite different noise exposures. For example, greater numbers of people in cohesive, stable and well-established communities, composed of homogeneous, older, wealthier, and better-educated populations, may describe themselves as annoyed by noise exposure as do people exposed to the same noise environments in the complementary sorts of communities.

In communities in which the prevalence of annoyance is affected primarily by noise, reductions in exposure can be expected to lead to reductions in prevalence of annoyance. In communities in which the prevalence of annoyance is controlled by non-acoustic factors such as odor, traffic congestion, etc., there may be little or no reduction in annoyance associated with reductions in exposure.

The intensity of community response to noise exposure may even in some cases be essentially independent of physical exposure. In the case of community response to actions such as airport siting or scheduling of supersonic transport aircraft, vigorous reaction has been encountered at the mere threat of exposure, or minor increases in exposure.

Although the prevalence of annoyance in a community cannot be measured without soliciting self-reports from people about covert mental states, this does not imply that measurement of annoyance cannot be

accomplished in an objective manner. The standard method for determining the prevalence of annoyance in noise-exposed communities is by attitudinal survey. Surveys generally solicit self-reports of annoyance through one or more questions of the form "How bothered or annoyed have you been by the noise of (noise source) over the last (time period)?" Respondents are typically constrained in structured interviews to select one of a number of response alternatives, often named categories such as "Not At All Annoyed," "Slightly Annoyed," "Moderately Annoyed," "Very Annoyed," or "Extremely Annoyed." Other means are sometimes used to infer the prevalence of annoyance from survey data (for example, by interpretation of responses to activity interference questions or by construction of elaborate composite indices), with varying degrees of face validity and success.

Predictions of the prevalence of annoyance in a community can be made by extrapolation from an empirical dosage-effect relationship. Based on the results of a number of sound surveys, Schultz (1978) developed a relationship between percent highly annoyed and DNL:

$$\% \text{ Highly Annoyed} = 0.8553 \text{ DNL} - 0.0401 \text{ DNL}^2 + 0.00047 \text{ DNL}^3$$

Note that this relationship should not be evaluated outside the range of DNL = 45 to 90 dB. Table H-15 presents this equation graphically. Less than 15 percent of the population would be predicted to be annoyed by DNL values less than 65 dBA while over 37 percent of the population would be predicted to be annoyed from DNL values greater than 75 dBA. This relationship has recently been re-evaluated and found to be relevant (Fidell et al, 1988).

Speech Interference and Related Effects Due to Aircraft Flyover Noise

One of the ways that noise affects daily life is by preventing or impairing speech communication. In a noisy environment, the ability to communicate verbally is diminished when speech signals are masked by intruding noises. Speakers generally raise their voices or move closer to listeners to compensate for masking noise in face-to-face communications, thereby increasing the level of speech at the listener's ear. As intruding noise levels rise higher and higher, speakers may cease talking altogether until conversation can be resumed at comfortable levels of vocal effort after noise intrusions end.

If the speech source is a radio or TV, the listener may increase the volume during a noise intrusion. If noise intrusions occur repeatedly, the listener may choose to set the volume at a high level such that the program material can be heard even during noise intrusions.

In addition to losing information contained in the masked speech material, the listener may lose concentration because of the interruptions and thus become annoyed. If the speech message is some type of warning, the consequences could be serious.

Current practice in quantification of the magnitude of speech interference and predicting speech intelligibility range from metrics based on A-weighted sound pressure levels of the intruding noise alone to more complex metrics requiring detailed spectral information about both speech and noise intrusions. There are other effects of the reduced intelligibility of speech caused by noise intrusions. For example, if the understanding of speech is interrupted, performance may be reduced, annoyance may increase, and learning may be impaired.

As the noise level of an environment increases, people automatically raise their voices, usually at the rate of roughly proportional to the increase in background noise level. The effect does not take place, however, if the noise event were to rise to a high level very suddenly.

Speech Interference Effects From Time-Varying Noise

Most research on speech interference due to noise has studied the case of steady state noise. As a result, reviews and summaries of noise effects on speech communications concentrate on continuous or at least long duration noises (Miller, 1974). However, noise intrusions are not always continuous or long duration, but are frequently transient in nature. Transportation noise generates many such noise intrusions, consisting primarily of individual vehicle passbys, such as aircraft flyovers. Noise emitted by other vehicles (motorboats, snowmobiles, and off-highway vehicles) is also transient in nature.

It has been shown, at least for aircraft flyover noise, that accuracy of predictors of speech intelligibility are ranked in a similar fashion for both steady-state and time-varying or transient sounds (Williams et al., 1971; Kryter and Williams, 1966). Of course, if one measures the noise of a flyover by the maximum A-level then intelligibility associated with this level would be higher than for a steady noise of the same value, simply because the level is less than the maximum for much of the duration of the flyover. One study (Williams et al., 1971) has actually shown that speech is more intelligible during those portions of the flyover that are equal in level to a steady sound of the same spectral shape.

Other Effects of Noise Which Relate to Speech Intelligibility

Aside from the direct effects of reduction in speech intelligibility, related effects may occur that tend to compound the loss of speech intelligibility itself.

Learning

One of the environments in which speech intelligibility plays a critical role is the classroom. In classrooms of schools exposed to aircraft flyover noise, speech becomes masked or the teacher stops talking altogether during an aircraft flyover (Crook and Langdon, 1974). Pauses begin to occur at flyover levels as low as 60 dBA. Masking of the speech of teachers who do not pause starts at about the same level.

At levels of 75 dB some masking occurs for 15 percent of the flyovers and increases to nearly 100 percent at 82 dB. Pauses occur for about 80 percent of the flyovers at this level. Since a marked increase in pauses and masking occurs at levels above 75 dB, this level is sometimes considered as one above that at which teaching is impaired due to disruption of speech communication. The effect that this may have on learning is unclear at this time. However, one study (Arnoult et al., 1986) could find no effect of noise on cognitive tasks from jet or helicopter noise over a range from 60 to 80 dB (A-level), even though intelligibility scores indicated a continuous decline starting at the 60 dB level. In a Japanese study (Ando et al., 1975) researchers failed to find differences in mental task performance among children from communities with different aircraft noise exposure.

Although there seems to be no proof that noise from aircraft flyovers affects learning, it is reported by Mills (1975) that children are not as capable of understanding speech in the presence of noise as are adults. It is hypothesized that part of the reason is due to the increased vocabulary which the adult can draw on as

compared to the more limited vocabulary available to the young student. Also, when one is learning a language it is critical that all words be heard, in contrast to the 95 percent sentence intelligibility that may be sufficient for general conversations. It was mentioned above that at 75 dB maximum A-level for aircraft flyovers heard in a classroom masking of speech increases rapidly. However, it was also noted that pausing while flyovers occur and masking of speech for those teachers that continue to lecture during a flyover start at levels around 60 dB. This is comparable to measured speech levels in the rear of classrooms which suggests 95 percent sentence intelligibility during the maximum level of the flyover (Pearsons and Bennett, 1974).

Annoyance

Klatt (1969) studied the annoyance of speech interference by asking people to judge the annoyance of aircraft noise in the presence and absence of speech material. The speech material was composed of passages from newspaper and magazine articles. In addition to rating aircraft noise on an acceptability scale (unacceptable, barely acceptable, acceptable, and of no concern), the subjects were required to answer questions about the speech material. The voice level was considered to represent a raised voice level (assumed to be 68 dB). In general, for the raised voice talker, the rating of barely acceptable was given to flyover noise levels of 73-76 dB. However, if the speech level was reduced, the rating of the aircraft tended more toward unacceptable. The results suggested that if the speech level were such that 95 percent or better sentence intelligibility was maintained then a barely acceptable rating or better acceptability rating could be expected. This result is in general agreement with the finding in schools that teachers pause or have their speech masked at levels above 75 dB (Crook and Langdon, 1974).

Hall (1985) recently tried to relate various types of activity interference, related to speech and sleeping, to annoyance. The study found that there is a 50 percent chance that people's speech would be interfered with at a maximum A-level of 58 dB. This result appears to contradict the other results until one considers that the speech levels in the Klatt study and in the school environment of the Cook study are higher than the levels typically used in the home. Also, in a classroom situation the teacher raises his or her voice for awhile to an even higher level as the flyover noise increases in intensity.

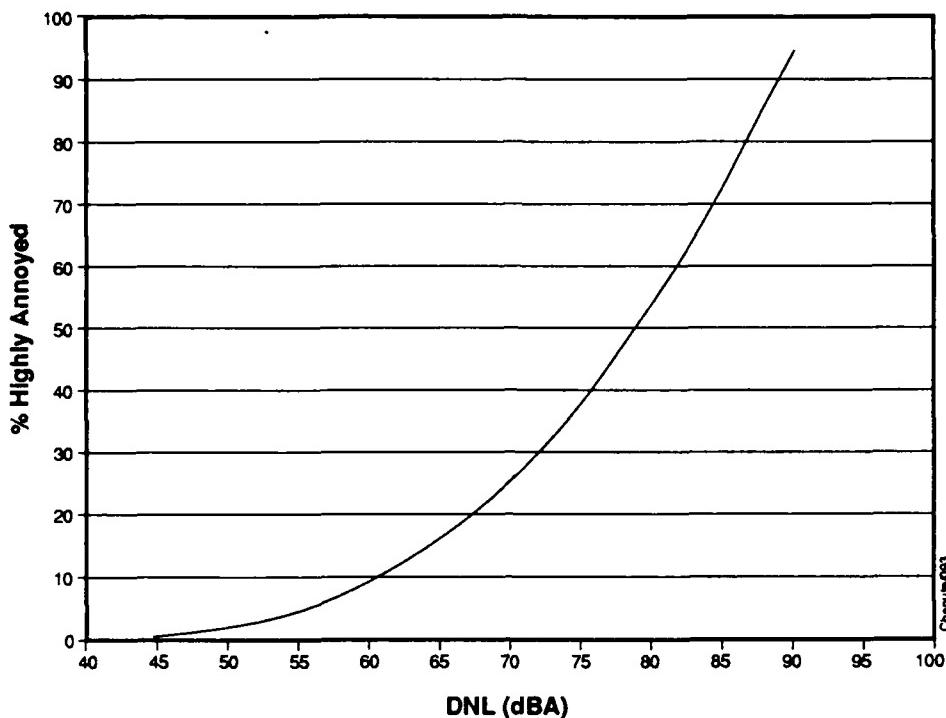
Predicting Speech Intelligibility and Related Effects Due to Aircraft Flyover Noise

It appears, from the above discussions, that when aircraft flyover noises exceed approximately 60 dB, speech communication may be interfered with either by masking or by pausing on the part of the speaker. Increasing the level of the flyover noise maximum to 80 dB would reduce the intelligibility to zero even if a loud voice is used for those who attempt to communicate.

The levels mentioned above refer to indoor levels. The same noises measured outdoors would be 17 to 27 dB higher than these levels for summer (windows open) and winter months (windows closed), respectively. These estimates are taken from EPA reviews of available data (U.S. Environmental Protection Agency, 1974).

Levels of aircraft noise produced inside dwellings and schools near the ends of runways at airports would in many cases exceed the levels of 60 dB inside (77 dB outside) homes and schools. The high speed and low altitude of the aircraft involved are unlikely to produce noise intrusions at these levels for durations greater than a few seconds during each occurrence. During this time speech intelligibility would be close

Table H-15. Community Noise Annoyance Curves



to zero. However, since the total duration is so short, it is anticipated that only a few syllables would be lost. People may be annoyed, but the annoyance would not be due to loss in speech communication, but rather due to startle or sleep disturbance as discussed below.

Sleep Disturbance Due to Noise

The effects of noise on sleep have long been a concern of parties interested in assuring suitable residential noise environments. Early studies noted background levels in people's bedrooms in which sleep was apparently undisturbed by noise. Various levels between 25 to 50 dBA were observed to be associated with an absence of sleep disturbance. The bulk of the research on noise effects on which the current relationship is based was conducted in the 1970s. The tests were conducted in a laboratory environment in which awakening was measured either by a verbal response or by a button push, or by brain wave recordings (EEG) indicating stages of sleep (and awakening). Various types of noise were presented to the sleeping subjects throughout the night. These noises consisted primarily of transportation noises including those produced by aircraft, trucks, cars and trains. The aircraft noises included flyover noises as well as sonic booms. Synthetic noises, including laboratory-generated sounds consisting of shaped noises and tones, were also studied.

Lukas (1975) and Goldstein and Lukas (1980) both reviewed data available in the 1970s on sleep-stage changes and waking effects of different levels of noise. Since no known health effects were associated with

either waking or sleep-stage changes, either measure was potentially useful as a metric of sleep disturbance. However, since waking, unlike sleep-stage changes, is simple to quantify, it is often selected as the metric for estimating the effects of noise on sleep. These two reviews showed great variability in the percentage of people awakened by exposure to noise. The variability is not merely random error, but reflects individual differences in adaptation or habituation, as well as interpretation of the meaning of the sounds. Such factors cannot be estimated from the purely acoustic measures in noise exposure.

Another major review of literature related to sleep disturbance (Griefahn and Muzet, 1978) provides information similar to Lucas' for effects of noise on waking, but suggests less waking for a given level of noise. A recent literature review (Pearsons et al., 1989) demonstrates that the relationship, based exclusively on laboratory studies, predicts greater sleep disturbance than that likely to occur in a real-life situation in which some adaptation has occurred. The prediction relationships developed in this review should not be considered to yield precise estimates of sleep disturbance because of the great variability in the data sets from which they were developed. The relationships include only the duration and level components of "noise exposure." Increasing the precision of prediction would depend on quantification of some of the non-acoustic factors. Further, a recent review of field as well as laboratory studies suggests that habituation may reduce the effect of noise on sleep (Pearsons et al., 1989).

Noise must penetrate the home to disturb sleep. Interior noise levels are lower than exterior levels due to the attenuation of the sound energy by the structure. The amount of attenuation provided by the building is dependent on the type of construction and whether the windows are open or closed. The Environmental Protection Agency (EPA) recommends the use of attenuation factors of 17 dB (decibels) for summertime (windows open) and 27 dB for wintertime (windows closed) conditions. Incorporating these attenuation factors, the percent awakened relationships discussed above under summer conditions are presented in Table H-16.

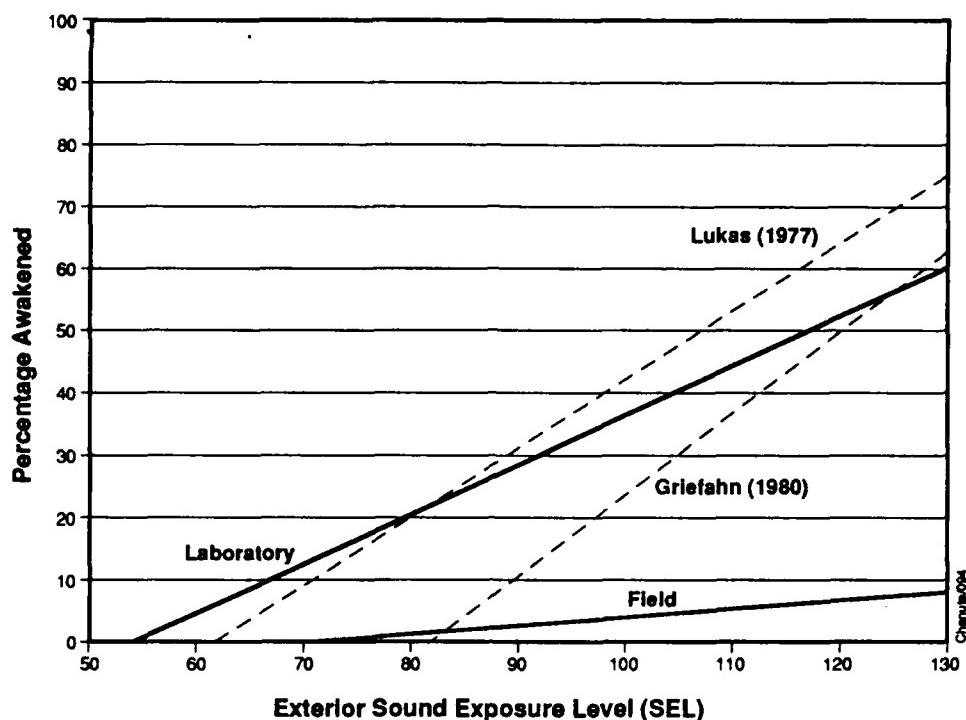
In conclusion, the scientific literature does not provide a consensus on sleep disturbance. There is no recognized criteria or standard which provides guidance to assess sleep disturbance due to noise.

Noise-Induced Hearing Loss

Hearing loss is measured in decibels and refers to the permanent auditory threshold shift of an individual's hearing in a ear. Auditory threshold refers to the minimum acoustic signal that evokes an auditory sensation, i.e., the quietest sound a person can hear. When a threshold shift occurs a person's hearing is not as sensitive as before and the minimum sound that a person can hear must be louder. Threshold shift which naturally occurs with age is called presbycusis. Exposure to high levels of sound can cause temporary and permanent threshold shifts usually referred to as noise induced hearing loss. Permanent hearing loss is generally associated with destruction of the hair cells of the inner ear.

The U.S. Environmental Protection Agency (1974) and the Committee on Hearing, Bioacoustics, and Biomechanics (National Academy of Sciences, 1981) have addressed the risk of outdoor hearing loss. They have concluded that hearing loss would not be expected for people living outside the noise contour of 75 DNL. Several studies of populations near existing airports in the United States and the United Kingdom have shown that the possibility for permanent hearing loss in communities near intense commercial take-off and landing patterns is remote. A FAA-funded study compared the hearing of the population near the Los Angeles International Airport to that of the population in a quiet area away from aircraft noise (Parnel et al.,

Table H-16. Sleep Disruption (Sleep Awakening)



Source: Pearsons (1989)

1972). A similar study was performed in the vicinity of London's Heathrow Airport (Ward et al., 1972). Both studies concluded that there was no significant difference between the hearing loss of the two populations, and no correlation between the hearing level with the length of time people lived in the airport neighborhood.

Extra-Auditory Health Effects of Residential Aircraft Noise

Based on review of previous research in the field (Thompson, 1981; Thompson and Fidell, 1989), predictions of extra-auditory health effects of aircraft noise cannot be made. A valid, predictive procedure requires both evidence for causality between aircraft noise exposure and adverse extra-auditory health consequences, and knowledge of a quantitative relationship between amounts of noise exposure (dose) and specific health effects. Because results of studies of aircraft noise on health are equivocal, there is no sound scientific basis for making adequate risk assessments.

Alleged extra-auditory health consequences of aircraft noise exposure which have been studied include birth defects, low birth weight, psychological illness, cancer, stroke, hypertension, sudden cardiac death, myocardial infarction and cardiac arrhythmias. Of these, hypertension is the most biologically plausible effect of noise exposure. Noise appears to cause many of the same biochemical and physiological reactions, including temporary elevation of blood pressure, as do many other environmental stressors.

These temporary increases in blood pressure are believed to lead to a gradual resetting of the body's blood pressure control system. Over a period of years, permanent hypertension may develop (Peterson et al., 1984).

Studies of residential aircraft noise have produced contradictory results. Early investigations indicated that hypertension was from 2 to 4 times higher in areas near airports than in areas located away from airports (Karagodina et al., 1969). Although Meechan and Shaw (1988) continue to report excessive cardiovascular mortality among individuals 75 years or older living near the Los Angeles Airport, their findings cannot be replicated (Frerichs et al., 1980). Ecologic studies among residents of Nevada, where supersonic flight operations have occurred since 1969, demonstrate no evidence of a relationship between sonic boom exposure and mortality and morbidity (Anton-Guigis et al., 1986). In fact, noise exposure increased over the years while there was a decline in all cause, age-adjusted death rates and inconsistent changes in age-adjusted cardiovascular, hypertension and cerebrovascular disease rates.

Studies which have controlled for multiple factors have shown no, or very weak, associations between noise exposure and extra-auditory health effects. The observations hold for studies of occupational and traffic noise as well as for aircraft noise exposure. In contrast to the early reports of 2- to 6-fold increases in hypertension due to high industrial noise (Thompson et al., 1989), the more rigorously controlled studies of Talbott et al. (1985) and van Dijk et al. (1987) show no association between hypertension and prolonged exposure to high levels of occupational noise.

Studies of occupational noise exposure effects have consistently shown that the effect of noise, if any, is so modest that it is difficult to demonstrate in epidemiologic studies. The reported mean differences in blood pressure between high and low noise exposed groups range from 0 to 10 mm Hg.

In the aggregate, studies indicate no association between street traffic noise and blood pressure or other cardiovascular changes. Two large, prospective collaborative studies of heart disease are of particular interest. To date, cross-sectional data from these cohorts offer contradictory results. Data from one cohort show a slight increase in mean systolic blood pressure (2.4 mm Hg) in the noisiest compared to the quietest area, whereas data from the second cohort show the lowest mean systolic blood pressure and highest HDL cholesterol (lipoprotein predictive of heart disease) for men in the noisiest area (Babisch and Gallacher, 1990). These effects of traffic noise on blood pressure and blood lipids were more pronounced in men who were also exposed to high levels of noise at work.

It is clear from the foregoing that the current state of technical knowledge cannot support inference of a causal or consistent relationship, nor a quantitative dose-response, between residential aircraft noise exposure and health consequences. Thus, no technical means are available for predicting extra-auditory health effects of noise exposure. This conclusion cannot be construed as evidence of no effect of residential aircraft noise exposure on extra-auditory health. Current findings, taken in sum, indicate only that further rigorous studies are needed.

Domestic Animals and Wildlife

A recent study was published on the effects of aircraft noise on domestic animals which provided a review of the literature and a review of 209 claims pertinent to aircraft noise over a period spanning 32 years. (Bowles et al., 1990). Studies since the late 1950s were motivated both by public concerns about what was

at that time a relatively novel technology, supersonic flight, and by claims leveled against the U. S. Air Force (USAF) for damage done to farm animals by very low-level subsonic overflights. Since that time over 40 studies of aircraft noise and sonic booms, both in the U.S. and overseas, have addressed acute effects, including effects of startle responses (sheep, horses, cattle, fowl), effects on reproduction and growth (sheep, cattle, fowl, swine), parental behaviors (fowl, mink), milk letdown (dairy cattle, dairy goats, swine), and egg production.

The literature on the effects of noise on domestic animals is not large, and most of the studies have focused on the relation between dosages of continuous noise and effects. Chronic noises are not a good model for aircraft noise, which lasts only a few seconds, but which is often very startling. The review of claims suggest that the major source of loss was panics induced by naive animals.

Aircraft noise may have effects because it might trigger a **startle response**, a sequence of physiological and behavioral events that once helped animals avoid predators. Aircraft startle effects are not solely caused by noise; visual intrusion also contributes.

The link between startles and **serious effects**, i.e., effects on productivity, is less certain. Here, we will define an effect as any change in a domestic animal that alters its economic value, including changes in body weight or weight gain, numbers of young produced, weight of young produced, fertility, milk production, general health, longevity, or tractability. At this point, changes in productivity are usually considered an adequate indirect measure of changes in well-being, at least until objective legal guidelines are provided.

Recent focus on the effects on production runs counter to a trend in the literature towards measuring the relation between noise and physiological effects, such as changes in corticosteroid levels, and in measures of immune system function. As a result, it is difficult to determine the relation between dosages of noise and serious effects using only physiological measures. The experimental literature is inadequate to document long-term or subtle effects resulting from exposure to aircraft noise.

Land Use Compatibility Guidelines

Widespread concern about the noise impacts of aircraft noise essentially began with the decade beginning in 1950 which saw the major introduction of high power jet aircraft into military service. The concern about noise impacts in the communities around airbases, and also within the airbases themselves, led the Air Force to conduct major investigations into the noise properties of jets, methods of noise control for test operations, and the effects of noise from aircraft operations in communities surrounding airbases. These studies established an operational framework of investigation and identified the basic parameters affecting community response to noise. These studies also resulted in the first detailed procedures for estimating community response to aircraft noise (Stevens and Pietrasanta, 1957).

Although most attention was given to establishing methods of estimating residential community response to noise (and establishing the conditions of noise "acceptability" for residential use), community development involves a variety of land uses with varying sensitivity to noise. Thus, land planning with respect to noise requires the establishment of noise criteria for different land uses. This need was met with the initial development of aircraft noise compatibility guidelines for varied land uses in the mid-1960s (Bishop, 1964).

In residential areas, noise intrusions generate feelings of annoyance on the part of individuals. Increasing degrees of annoyance lead to the increasing potential for complaints and community actions (most typically, threats of legal actions, drafting of noise ordinances, etc.). Annoyance is based largely upon noise interference with speech communication, listening to radio and TV, and sleep. Annoyance in the home may also be based upon dislike of "outside" intrusions of noise even though no specific task is interrupted.

Residential land use guidelines have developed from consideration of two related factors:

- (a) Accumulated case history experience of noise complaints and community actions near civil and military airports;
- (b) Relationships between environmental noise levels and degrees of annoyance (largely derived from social surveys in a number of communities).

In the establishment of land use guidelines for other land uses, the prime consideration is task interference. For many land uses, this translates into the degree of speech interference, after taking into consideration the importance of speech communication and the presence of non-aircraft noise sources related directly to the specific land use considered. For some noise-sensitive land uses where any detectable noise signals which rise above the ambient noise are unwanted (such as music halls), detectability may be the criterion rather than speech interference.

A final factor to be considered in all land uses involving indoor activities is the degree of noise insulation provided by the building structures. The land use guideline limits for unrestricted development within a specific land use assume noise insulation properties provided by typical commercial building construction. The detailed land use guidelines may also define a range of higher noise exposure where construction or development can be undertaken, provided a specified amount of noise insulation is included in the buildings. Special noise studies, undertaken by architectural or engineering specialists, may be needed to define the special noise insulation requirements for construction in these guideline ranges.

Estimates of total noise exposure resulting from aircraft operations, as expressed in DNL values, can be interpreted in terms of the probable effect on land uses. The Federal Interagency Committee on Urban Noise (1980) developed land use compatibility guidelines for noise. Based on the guidelines, the FAA developed guidelines for evaluating land uses in aircraft noise exposure areas were originally developed by the FAA as presented in Section 3.4.4, Noise. Part 150 of the FAA regulations prescribe the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs. It prescribes the use of yearly DNL in the evaluation of airport noise environments. It also identifies those land use types which are normally compatible with various levels of noise exposure. Compatible or incompatible land use is determined by comparing the predicted or measured DNL level at a site with the values given in the table. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular level might not accurately assess an individual's perception of an actual noise environment.

While the FAA guidelines specifically apply to aircraft noise, it should be noted that DNL is also used to describe the noise environment due to other community noise sources, including motor vehicles and

railroads. The use of DNL is endorsed by the scientific community to assess land use compatibility as it pertains to noise (American National Standards Institute, 1980). Hence, the land use guidelines presented by the FAA can also be used to assess the noise impact from community noise sources other than aircraft.

REFERENCES

- American National Standards Institute, 1980. Sound Level Descriptors for Determination of Compatible Land Use, ANSI S3.23-1980.
- Ando, Y., Y. Nakane, and J. Egawa, 1975. Effects of aircraft noise on the mental work of pupils, Journal of Sound and Vibration 43(4): 683-691.
- Anton-Guirgis, H., B. Culver, S. Wang, and T. Taylor, 1986. Exploratory Study of the potential effects of exposure to sonic boom on human health, Vol 2: Epidemiological Study, Report No. AAMRL-TR-86-020.
- Arnoult, M. D., L. G. Gilliland, and J. W. Voorhees, 1986. Annoyingness of aircraft noise in relation to cognitive activity, Perceptual and Motor Skills 63: 599-616.
- Babisch, W., and J. Gallacher, 1990. Traffic noise, blood pressure and other risk factors - The caerphilly and speedwell collaborative heart disease studies. In B. Berglund, U. Berglund, J. Karlsson & T. Linvall (Eds.), Noise '88: New advances in noise research, pp. 315-326, Swedish Council for Building Research, Stockholm, Sweden.
- Beranek, L. L., 1947. Airplane quieting II – specification of acceptable noise levels, Trans. ASME 67: 97-100.
- Bishop, D. E., 1964. Development of Aircraft Noise Compatibility for Varied Land Uses, FAA SRDS Report RD-64-148, II.
- Bowles, A. E., P. K. Yochem, and F. T. Awbrey, 1990. The Effects of Aircraft Overflights and Sonic Booms on Domestic Animals, NSBIT Technical Operating Report No. 13, BBN Laboratories Inc.
- Brown, J. E. III, R. N. Thompson, and E. D. Folk, 1975. Certain non-auditory physiological responses to noises, Journal of the American Industrial Hygiene Association 36: 285-291.
- Cohen, S., G. W. Evans, D. S. Krantz, and D. Stokols, 1980. Psychological, motivational, and cognitive effects of aircraft noise on children: Moving from the laboratory to the field, American Psychology 35: 231-243.
- Crook, M. A., and F. J. Langdon, 1974. The effects of aircraft noise on schools around London Airport, Journal of Sound and Vibration 34(2): 221-232.
- Departments of the Air Force, the Army, and the Navy, 1978. Environmental Protection Planning in the Noise Environment, AFM 19-10, TM 5-803-2, NAVPAC P-970, June.
- van Dijk, F. J. H., A. M. Souman, and F. F. de Fries, 1987. Nonauditory effects of noise in industry. Vol. I: A final field study in industry, International Archives of Occupational and Environmental Health 59: 133-145.
- Federal Aviation Administration, 1982. Integrated Noise Model Version 3.9 User's Guide, Report No. FAA-EE-81-17.
- Federal Highway Administration, 1978. FHWA Highway Traffic Noise Prediction Model, Report No. FHWA-RD-77-118.
- Federal Interagency Committee on Urban Noise, 1980. Guidelines for Considering Noise in Land Use Planning and Control, published by U.S. Department of Transportation.

- Fidell, S., T. J. Schultz, and D. M. Green, 1988. A theoretical interpretation of the prevalence rate of noise-induced annoyance in residential populations, Journal of the Acoustical Society of America 84(6).
- Frerichs, R. R., B. L. Beeman, and A. H. Coulson, 1980. Los Angeles Airport noise and mortality – Faulty analysis and public policy, American Journal of Public Health 70: 357-362.
- Goldstein, J. and J. Lukas, 1980. Noise and Sleep: Information Needs for Noise Control, Proceedings of the Third International Congress on Noise as a Public Health Problem ASHA Report No. 10, pp. 442-448.
- Griefahn, B. and A. Muzet, 1978. Noise-induced sleep disturbances and their effect on health, Journal of Sound and Vibration 59(1): 99-106.
- Hall, F., S. Taylor, and S. Birnie, 1985. Activity interference and noise annoyance, Journal of Sound and Vibration 103(2).
- Hatano, M. M., 1982. Noise impact of rail passenger service, Internoise '82 Proceedings, pp. 201-224.
- Ising, H. and R. Michalak, 1990. Effects of noise from military low-level flights on humans. In B. Berglund, U. Berglund, J. Karlsson and T. Linvall (Eds.), Noise '88: New advances in noise research, pp. 305-314, Swedish Council for Building Research, Stockholm, Sweden.
- Karagodina, I. L., S. A. Soldatkina, I. L. Vinokur, and A. A. Klimukhin, 1969. Effect of aircraft noise on the population near airports, Hygiene and Sanitation 34: 182-187.
- Kent, S. J., H. E. Von Gierke, and G. D. Tolan, 1986. Analysis of the potential association between noise-induced hearing loss and cardiovascular disease in USAF aircrew members, Aviation, Space, and Environmental Medicine 57(4): 348-361.
- Klatt, M., K. Stevens, and C. Williams, 1969. Judgments of the acceptability of aircraft noise in the presence of speech, Journal of Sound and Vibration 9(2): 263-275.
- Knipschild, P. and N. Oudshoorn, 1977. Medical effects of aircraft noise: Drug survey, International Archives of Occupational and Environmental Health 40: 197-200.
- Knipschild, P., 1977. Medical effects of aircraft noise: Community cardiovascular survey; general practice survey, International Archives of Occupational and Environmental Health 40: 185-196.
- Kryter, K. D., and C. E. Williams, 1966. Masking of speech by aircraft noise, Journal of the Acoustical Society of America 39: 138-150.
- Lukas, J., 1975. Noise and Sleep: A literature review and a proposed criterion for assessing effect, Journal of the Acoustical Society of America 58(6).
- Meechan, W. C., and Shaw, N. A., 1988. Increase in disease mortality rates due to aircraft noise, Proceedings of the International Congress of Noise as a Public Health Problem, Swedish Council for Building Research, Stockholm, Sweden.
- Miller, J. D., 1974. Effects of noise on people, Journal of the Acoustical Society of America 56(3): 729-764.
- Mills, J. H., 1975. Noise and children: a review of literature, Journal of the Acoustical Society of America 58(4): 767-779.

National Academy of Sciences, 1981. The Effects on Human Health from Long-term Exposure to Noise, Report of Working Group 81, Committee on Hearing, Bioacoustics and Biomechanics, The National Research Council, Washington, DC.

Parnet, Nagel, and Cohen, 1972. Evaluation of Hearing Levels of Residents Living Near a Major Airport, Report FAA-RD-72-72.

Pearsons, K. S., & R. Bennett, 1974. Handbook of noise ratings, Report No. NASA CR-2376, National Aeronautics and Space Administration, Washington, DC.

Pearsons, K. D. Barber, and B. Tabachnick, 1989. Analyses of the predictability of noise-induced sleep disturbance, Report No. HSD-TR-89-029, BBN Systems and Technologies Corporation, Canoga Park, CA.

Peterson, E. A., J. S. Augenstein, and C. L. Hazelton, 1984. Some cardiovascular effects of noise, Journal of Auditory Research 24: 35-62.

Reddingius, N. H., and A. E. Bowles, 1990. Assessment System For Aircraft Noise (ASAN): Extensions to Alpha Test ProtoType System Software, Volume V, NSBIT Technical Operating Report No. 20, BBN Laboratories Inc.

Saurenman, H. J., J. T. Nelsen, and G. P. Wilson, 1982. Handbook of Urban Rail Noise and Vibration Control, U.S. Department of Transportation.

Schultz, T. J., 1978. Synthesis of social surveys on noise annoyance, Journal of the Acoustical Society of America 64(2): 377-405.

Stevens, K. N., and A. C. Pietrasanta, 1957. Procedures for Estimating Noise Exposure and Resulting Community Reactions from Air Base Operations, WADC TN-57-10, Wright Air Development Center, Wright-Patterson Air Force Base, Ohio.

Swing, J. W., and D. B. Pies, 1973. Assessment of Noise Environments Around Railroad Operation, The Association of American Railroads.

Talbott, E., J. Helmkamp, K. Matthews, L. Kuller, Cottington, E. and G. Redmond, 1985. Occupational noise exposure, noise-induced hearing loss, and the epidemiology of high blood pressure. American Journal of Epidemiology 121: 501-515.

Thompson, S. J., 1981. Epidemiology Feasibility Study: Effects of Noise on the Cardiovascular System, Report No. EPA 550/9-81-103.

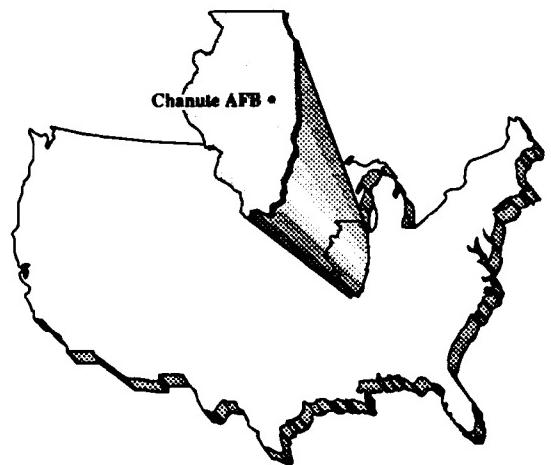
Thompson, S., and Fidell, S., 1989. Feasibility of epidemiologic research on nonauditory health effects of residential aircraft noise exposure, BBN Report No. 6738, BBN Systems and Technologies, Canoga Park, CA.

U.S. Environmental Protection Agency, 1973. Public health and welfare criteria for noise, Report No. NCD 73.1, Washington, DC.

U.S. Environmental Protection Agency 1974. Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety, EPA Publication No. 550/9-74-004, Washington, DC.

Ward, Cushing, and Burns, 1972. TTS from neighborhood aircraft noise, Journal of the Acoustical Society of America 55(1).

Williams, C. E., K. S. Pearson, and M. H. L. Hecker, 1971. Speech intelligibility in the presence of time-varying aircraft noise, Journal of the Acoustical Society of America 56(3).



APPENDIX I

APPENDIX I

AIR QUALITY

INTRODUCTION

The following tables contain information used to calculate the annual and worst-case hourly air pollutant emissions associated with the Proposed Action aircraft scenarios. Emissions are calculated for the years 1994, 1999, 2004, and 2014. These emission calculations are then used in the ISCST air quality model to predict the worst-case 1-hour ground-level ambient concentrations associated with aircraft operations.

TABLE I-1. AIRCRAFT EMISSION RATES PER LTO CYCLE

Aircraft Type	Emission Rate per LTO Cycle, (pounds)				
	CO	Total HC	NO2	SO2	Particulates
B-727-200	55.95	13.44	29.64	3.27	1.17
B-737-300	37.30	8.96	19.76	2.18	0.78
B-747-400	66.76	10.00	124.90	7.52	5.20
B-757-200 (a)	77.92	31.40	33.06	3.32	0.14
B-767-200 (a)	77.92	31.40	33.06	3.32	0.14
DC-9-30	37.30	8.96	19.76	2.18	0.78
Single Engine (b)	14.37	0.26	0.02	0.00	0.00
Multi Engine (c)	33.10	1.15	0.13	0.00	0.00
Turbo Prop (d)	7.16	5.08	0.82	0.18	0.00
Turbo Fan (e)	11.26	3.74	3.74	0.92	0.00

Source: U.S. EPA, 1985, AP-42, Table II-1-9.

- Notes:
- a. Engines on B-757-200 and B-767-200 (2 per aircraft) assumed similar to engines on MD DC-1u-30 (3 per aircraft).
 - b. Single Engine category; assumed to be represented by Piper Warrior.
 - c. Multi Engine category assumed to be represented by Cessna Skymaster.
 - d. Turbo Prop category assumed to be represented by Beech B99.
 - e. Turbo Fan category assumed to be represented by Gates Learjet 35.

TABLE I-2. PROPOSED ACTION ANNUAL LTO CYCLES PER AIRCRAFT TYPE

Aircraft Type	Annual Operations			
	1994	1999	2004	2014
B-727-200	0	730	0	0
B-737-300	720	1,170	1,170	1,170
B-747-400	80	130	130	130
B-757-200	720	1,170	1,900	2,630
B-767-200	80	130	130	130
DC-9-30	730	0	0	0
Single Engine	6,940	9,900	10,710	11,468
Multi Engine	1,600	2,850	3,400	3,948
Turbo Prop	730	1,200	1,530	1,880
Turbo Fan	730	1,095	1,460	1,504

Source: Illinois State Department of Transportation, 1991

TABLE I-3. PROPOSED ACTION ANNUAL EMISSIONS BY AIRCRAFT TYPE - 1994

Aircraft Type	Annual Emissions, (tons)				
	CO	Total HC	NO2	SO2	Particulates
B-727-200	0.00	0.00	0.00	0.00	0.00
B-737-300	13.43	3.23	7.11	0.78	0.28
B-747-400	2.67	0.40	5.00	0.30	0.21
B-757-200	28.05	11.30	11.90	1.20	0.05
B-767-200	3.12	1.26	1.32	0.13	0.01
DC-9-30	13.61	3.27	7.21	0.80	0.28
Single Engine	49.86	0.90	0.07	0.00	0.00
Multi Engine	26.48	0.92	0.10	0.00	0.00
Turbo Prop	2.61	1.85	0.30	0.07	0.00
Turbo Fan	4.11	1.37	1.37	0.34	0.00
TOTAL	143.95	24.50	34.38	3.61	0.83

TABLE I-4. PROPOSED ACTION ANNUAL EMISSIONS BY AIRCRAFT TYPE - 1999

Aircraft Type	Annual Emissions, (tons)				
	CO	Total HC	NO2	SO2	Particulates
B-727-200	20.42	4.91	10.82	1.19	0.43
B-737-300	21.82	5.24	11.56	1.28	0.46
B-747-400	4.34	0.65	8.12	0.49	0.34
B-757-200	45.58	18.37	19.34	1.94	0.08
B-767-200	5.06	2.04	2.15	0.22	0.01
DC-9-30	0.00	0.00	0.00	0.00	0.00
Single Engine	71.13	1.29	0.10	0.00	0.00
Multi Engine	47.17	1.64	0.19	0.00	0.00
Turbo Prop	4.30	3.05	0.49	0.11	0.00
Turbo Fan	6.16	2.05	2.05	0.50	0.00
TOTAL	225.99	39.23	54.81	5.73	1.31

TABLE I-5. PROPOSED ACTION ANNUAL EMISSIONS BY AIRCRAFT TYPE - 2004

Aircraft Type	Annual Emissions, (tons)				
	CO	Total HC	NO2	SO2	Particulates
B-727-200	0.00	0.00	0.00	0.00	0.00
B-737-300	21.82	5.24	11.56	1.28	0.46
B-747-400	4.34	0.65	8.12	0.49	0.34
B-757-200	74.02	29.83	31.41	3.15	0.13
B-767-200	5.06	2.04	2.15	0.22	0.01
DC-9-30	0.00	0.00	0.00	0.00	0.00
Single Engine	76.95	1.39	0.11	0.00	0.00
Multi Engine	56.27	1.96	0.22	0.00	0.00
Turbo Prop	5.48	3.89	0.63	0.14	0.00
Turbo Fan	8.22	2.73	2.73	0.67	0.00
TOTAL	252.17	47.73	56.92	5.94	0.94

TABLE I-6. PROPOSED ACTION ANNUAL EMISSIONS BY AIRCRAFT TYPE - 2014

Aircraft Type	CO	Total HC	Annual Emissions, (tons)	NO2	SO2	Particulates
B-727-200	0.00	0.00		0.00	0.00	0.00
B-737-300	21.82	5.24		11.56	1.28	0.46
B-747-400	4.34	0.65		8.12	0.49	0.34
B-757-200	102.46	41.29		43.47	4.37	0.18
B-767-200	5.06	2.04		2.15	0.22	0.01
DC-9-30	0.00	0.00		0.00	0.00	0.00
Single Engine	82.40	1.49		0.11	0.00	0.00
Multi Engine	65.34	2.27		0.26	0.00	0.00
Turbo Prop	6.73	4.78		0.77	0.17	0.00
Turbo Fan	8.47	2.81		2.81	0.69	0.00
TOTAL	296.62	60.57		69.26	7.21	0.99

TABLE I-7. EMISSION RATES PER ENGINE IN IDLE MODE

Aircraft Type	CO	Total HC	Emission Rate, (lb/hr)	NO2	SO2	Particulates
B-727-200	39.10	10.10		3.91	1.15	0.36
B-737-300	39.10	10.10		3.91	1.15	0.36
B-747-400	35.91	5.43		4.74	1.77	2.20
B-757-200 (a)	88.04	36.18		3.02	1.21	0.04
B-767-200 (a)	88.04	36.18		3.02	1.21	0.04
DC-9-30	39.10	10.10		3.91	1.15	0.36
Single Engine (b)	10.21	0.35		0.05	0.00	0.00
Multi Engine (c)	5.21	1.59		3.09	0.00	0.00
Turbo Prop (d)	7.36	5.77		0.28	0.12	0.00
Turbo Fan (e)	11.11	4.05		0.54	0.18	0.00

Source: U.S. EPA, 1985, AP-42, Table II-1-7.

Notes:

- a. Engines on B-757-200 and B-767-200 assumed similar to engines on MD DC-10-30.
- b. Single Engine category assumed to be represented by Piper Warrior.
- c. Multi Engine category assumed to be represented by Cessna Skymaster.
- d. Turbo Prop category assumed to be represented by Beech B99.
- e. Turbo Fan category assumed to be represented by Gates Learjet 35.

TABLE I-8. EMISSION RATES PER ENGINE IN TAKEOFF MODE

Aircraft Type	CO	Total HC	Emission Rate, (lb/hr)		
			NO2	SO2	Particulates
B-727-200	6.99	0.50	202.60	9.98	3.70
B-737-300	6.99	0.50	202.60	9.98	3.70
B-747-400	7.32	1.96	660.40	17.85	3.75
B-757-200 (a)	0.38	0.19	671.00	18.90	0.54
B-767-200 (a)	0.38	0.19	671.00	18.90	0.54
DC-9-30	6.99	0.50	202.60	9.98	3.70
Single Engine (b)	96.00	1.05	0.20	0.02	0.00
Multi Engine (c)	143.90	1.22	0.36	0.03	0.00
Turbo Prop (d)	0.43	0.00	3.32	0.43	0.00
Turbo Fan (e)	1.86	0.14	29.80	1.55	0.00

Source: U.S. EPA, 1985, AP-42, Table II-1-7.

- Notes:
- a. Engines on B-757-200 and B-767-200 assumed similar to engines on MD DC-10-30.
 - b. Single Engine category assumed to be represented by Piper Warrior.
 - c. Multi Engine category assumed to be represented by Cessna Skymaster.
 - d. Turbo Prop category assumed to be represented by Beech B99.
 - e. Turbo Fan category assumed to be represented by Gates Learjet 35.

TABLE I-9. PROPOSED ACTION WORST-CASE HOUR AIRCRAFT TAKEOFF SCENARIOS

Aircraft Type	No. Engines	Taxi/Idle (minutes)	Takeoff (minutes)	1994	1999	2004	Number of Takeoffs Per Hour 2014
B-727-200	3	9.5	0.7	0	1	0	0
B-737-300	2	9.5	0.7	0	1	1	1
B-747-400	4	9.5	0.7	0	0	0	0
B-757-200	2	9.5	0.7	1	1	2	2
B-767-200	2	9.5	0.7	0	0	0	0
DC-9-30	2	9.5	0.7	1	0	0	0
Single Engine	1	6	0.3	5	7	8	8
Multi Engine	2	6	0.3	1	2	2	3
Turbo Prop	2	9.5	0.5	0	1	1	1
Turbo Fan	2	6	0.4	1	1	1	1

Source: U.S. EPA, 1985, AP-42, Table II-1-3. (Taxi/Idle out times reduced in half to reflect operation at smaller, less congested airport.
Minimum taxi/idle out time assumed to be 6 minutes.)

TABLE I-10. PROPOSED ACTION WORST-CASE HOUR EMISSIONS BY AIRCRAFT TYPE - 1994

Aircraft Type	Idle	CO Takeoff	Total HC Takeoff	Emissions, (lb/hour)			SO2 Idle	SO2 Takeoff	Idle Particulates	Particulates Takeoff
				Idle	NO2	Takeoff				
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-737-300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-747-400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	27.88	0.01	11.46	0.00	0.96	15.66	0.38	0.44	0.01	0.01
B-767-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	12.38	0.16	3.20	0.01	1.24	4.73	0.36	0.23	0.11	0.09
Single Engine	5.11	2.40	0.18	0.03	0.03	0.01	0.00	0.00	0.00	0.00
Multi Engine	1.04	1.44	0.32	0.01	0.62	0.00	0.00	0.00	0.00	0.00
Turbo Prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turbo Fan	2.22	0.02	0.81	0.00	0.11	0.40	0.04	0.02	0.00	0.00
TOTAL	48.63	4.04	15.96	0.06	2.95	20.79	0.78	0.70	0.13	0.10

TABLE I-11. PROPOSED ACTION WORST-CASE HOUR EMISSIONS BY AIRCRAFT TYPE - 1999

Aircraft Type	Emissions, (lb/hour)						Particulates			
	CO	CO ₂	Total HC	NO _x	Idle	Takeoff	SO ₂	Takeoff	Idle	Takeoff
Idle	Takeoff	Idle	Takeoff	Idle	Takeoff	Idle	Takeoff	Idle	Takeoff	
B-727-200	18.57	0.24	4.80	0.02	1.86	7.09	0.55	0.35	0.17	0.13
B-737-300	12.38	0.16	3.20	0.01	1.24	4.73	0.36	0.23	0.11	0.09
B-747-400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	27.88	0.01	11.46	0.00	0.96	15.66	0.38	0.44	0.01	0.01
B-767-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single Engine	7.15	3.36	0.25	0.04	0.04	0.01	0.00	0.00	0.00	0.00
Multi Engine	2.08	2.88	0.64	0.02	1.24	0.01	0.00	0.00	0.00	0.00
Turbo Prop	2.33	0.01	1.83	0.00	0.09	0.06	0.04	0.01	0.00	0.00
Turbo Fan	2.22	0.02	0.81	0.00	0.11	0.40	0.04	0.02	0.00	0.00
TOTAL	72.62	6.69	22.97	0.10	5.52	27.94	1.37	1.05	0.30	0.23

TABLE I-12. PROPOSED ACTION WORST-CASE HOUR EMISSIONS BY AIRCRAFT TYPE - 2004

Aircraft Type	Idle	CO Takeoff	Idle	Emissions, (lb/hour)			Particulates		
				Total HC	NO _x	Takeoff	Idle	SO ₂	Takeoff
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-737-300	12.38	0.16	3.20	0.01	1.24	4.73	0.36	0.23	0.11
B-747-400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	55.76	0.02	22.91	0.01	1.91	31.31	0.77	0.88	0.03
B-767-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single Engine	8.17	3.84	0.28	0.04	0.04	0.01	0.00	0.00	0.00
Multi Engine	2.08	2.88	0.64	0.02	1.24	0.01	0.00	0.00	0.00
Turbo Prop	2.33	0.01	1.83	0.00	0.09	0.06	0.04	0.01	0.00
Turbo Fan	2.22	0.02	0.81	0.00	0.11	0.40	0.04	0.02	0.00
TOTAL	82.95	6.93	29.67	0.09	4.62	36.51	1.20	1.14	0.14
									0.11

TABLE H-13. PROPOSED ACTION WORST-CASE HOUR EMISSIONS BY AIRCRAFT TYPE - 2014

Aircraft Type	Idle	CO Takeoff	Idle	Emissions, (lb/hour)			SO2 Takeoff	Idle	Idle	Particulates Takeoff
				Total HC	NOx	Idle				
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-737-300	12.38	0.16	3.20	0.01	1.24	4.73	0.36	0.23	0.11	0.09
B-747-400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	55.76	0.02	22.91	0.01	1.91	31.31	0.77	0.88	0.03	0.03
B-767-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single Engine	8.17	3.84	0.28	0.04	0.04	0.01	0.00	0.00	0.00	0.00
Multi Engine	3.13	4.32	0.95	0.04	1.85	0.01	0.00	0.00	0.00	0.00
Turbo Prop	2.33	0.01	1.83	0.00	0.09	0.06	0.04	0.01	0.00	0.00
Turbo Fan	2.22	0.02	0.81	0.00	0.11	0.40	0.04	0.02	0.00	0.00
TOTAL	83.99	8.37	29.98	0.10	5.24	36.51	1.20	1.14	0.14	0.11

TABLE I-14. PROPOSED ACTION WORST-CASE HOUR EMISSIONS FROM GROUND OPERATIONS

Year	LTOs	CO	Ground Operation Emissions a, (lb/hour)			
			Total HC	NO2	SO2	Particulates
1994	12330	1.44	0.63	1.80	0.18	0.09
1999	18375	2.14	0.94	2.68	0.27	0.13
2004	20430	2.38	1.04	2.98	0.30	0.15
2014	22860	2.66	1.17	3.33	0.33	0.17

Note: a: Ground operation emissions for the Proposed Action at Chanute AFB are calculated by multiplying ground operation emissions at known facilities times the ratio of LTO cycles for the two reuse scenarios. Aircraft ground operation emissions are assumed to be: CO = 1.12 ton per year, Total Hydrocarbons = 0.49 tpy, NOx = 1.40 tpy, SOx = 0.14 tpy, and Particulates = 0.07 tpy. These emissions are based on 8,778 LTO cycles.
(The emission rate for the worst-case hour is assumed to be 4 times the average hourly emission rate.)

For modeling purposes, emissions during the worst-case hour are assumed to occur from the nine volume sources as shown in Figure I-1. All idle and aircraft ground operation emissions are allocated to volume sources 1, 2, and 3 on an equal basis. The takeoff emissions are allocated to volume sources 4-9. The gram per second emission rates modeled for each volume source are shown by year in Tables I-15 through I-18. Results of the Proposed Action model runs for each pollutant are presented in Table I-19.

Selected information for the Minor Aircraft Maintenance Operations Alternative is given in Tables I-20 through I-25. Modeling results for the Minor Aircraft Maintenance Operations Alternative are summarized in Table I-26.

TABLE I-15. EMISSION RATES USED FOR MODELING OF PROPOSED ACTION WORST-CASE HOUR - 1994

Source No.	Emission Rate, (g/sec)				
	CO	Total HC	NO2	SO2	Particulates
1-3	2.103	0.697	0.199	0.04	0.009
4-9	0.085	0.001	0.437	0.015	0.002

TABLE I-16. EMISSION RATES USED FOR MODELING OF PROPOSED ACTION WORST-CASE HOUR - 1999

Source No.	Emission Rate, (g/sec)				
	CO	Total HC	NO2	SO2	Particulates
1-3	3.14	1.004	0.344	0.069	0.018
4-9	0.14	0.002	0.587	0.022	0.005

Volume Sources Used in ISCSST Modeling

Chanute AFB Rantoul, Illinois

EXPLANATION

Volume Source	Coordinates		Height (Meters)
	SW Corner (Meters)	X	
1	246	984	20
2	246	492	20
3	0	0	20
4	492	123	30
5	984	123	30
6	1476	123	30
7	1960	123	40
8	2460	123	50
9	2952	123	60

(X, Y) = (0,0) at Southwest
Corner of Volume Source #3.

----- Base Boundary

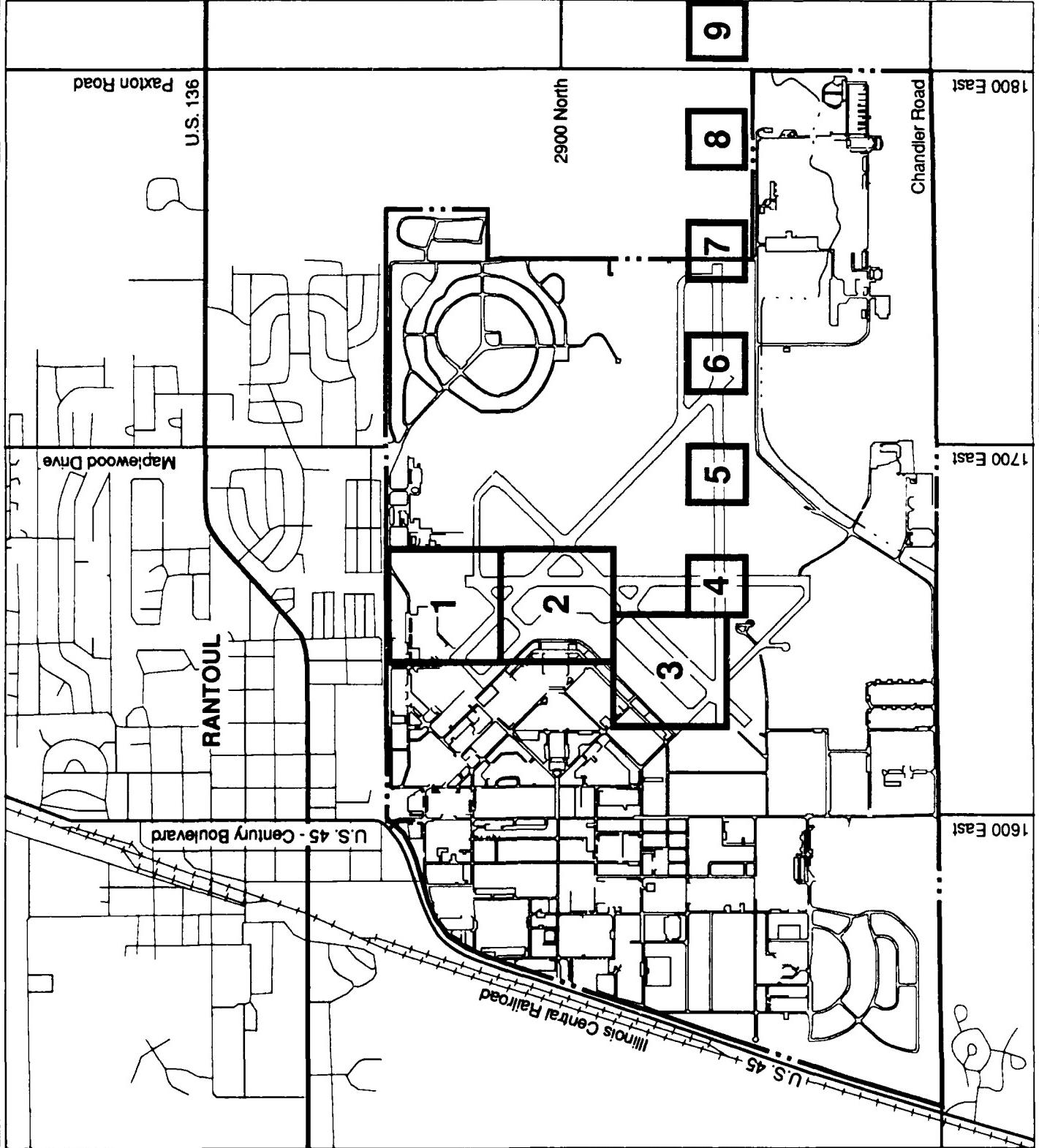
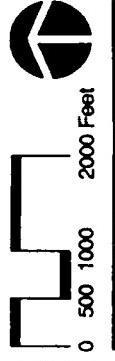


Figure I-1

TABLE I-17. EMISSION RATES USED FOR MODELING OF PROPOSED ACTION WORST-CASE HOUR - 2004

Source No.	Emission Rate, (g/sec)				
	CO	Total HC	NO2	SO2	Particulates
1-3	3.584	1.29	0.319	0.063	0.012
4-9	0.146	0.002	0.767	0.024	0.002

TABLE I-18. EMISSION RATES USED FOR MODELING OF PROPOSED ACTION WORST-CASE HOUR - 2014

Source No.	Emission Rate, (g/sec)				
	CO	Total HC	NO2	SO2	Particulates
1-3	3.639	1.308	0.36	0.065	0.013
4-9	0.176	0.002	0.767	0.024	0.002

TABLE I-19. PROPOSED ACTION MODELING RESULTS

Pollutant	Maximum One-Hour Concentrations by Year, (ug/m ³)			
	1994	1999	2004	2014
CO	669.7	1000.2	1141.3	1159.4
Total HC	221.4	318.9	409.7	415.4
NO2	73	121.7	119.2	131.4
SO2	13	22.4	20.5	21.2
Particulates	2.9	5.8	3.9	4.2

**TABLE I-20. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE ANNUAL LTO CYCLES
PER AIRCRAFT TYPE**

Aircraft Type	Annual Operations			
	1994	1999	2004	2014
B-727-200	0	730	0	0
B-737-300	135	225	270	315
B-747-400	15	25	30	35
B-757-200	135	225	1000	1775
B-767-200	15	25	30	35
DC-9-30	730	0	0	0
Single Engine	6940	9900	10710	11468
Multi Engine	1600	2850	3400	3948
Turbo Prop	730	1200	1530	1880
Turbo Fan	730	1095	1460	1504

Source: Illinois State Department of Transportation, 1990

**TABLE I-21. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE ANNUAL EMISSIONS BY
AIRCRAFT TYPE - 2014**

Aircraft Type	Annual Emissions, (tons)				
	CO	Total HC	NO2	SO2	Particulates
B-727-200	0	0	0	0	0
B-737-300	5.87	1.41	3.11	0.34	0.12
B-747-400	1.17	0.18	2.19	0.13	0.09
B-757-200	69.15	27.87	29.34	2.95	0.12
B-767-200	1.36	0.55	0.58	0.06	0
DC-9-30	0	0	0	0	0
Single Engine	82.4	1.49	0.11	0	0
Multi Engine	65.34	2.27	0.26	0	0
Turbo Prop	6.73	4.78	0.77	0.17	0
Turbo Fan	8.47	2.81	2.81	0.69	0
TOTAL	240.5	41.35	39.17	4.34	0.34

TABLE I-22. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE WORST-CASE HOUR AIRCRAFT TAKEOFF SCENARIOS

Aircraft Type	No. Engines	Taxi/Idle (minutes)	Takeoff (minutes)	Number of Takeoffs Per Hour		
				1999	2004	2014
B-727-200	3	9.5	0.7	0	1	0
B-737-300	2	9.5	0.7	0	0	0
B-747-400	4	9.5	0.7	0	0	0
B-757-200	2	9.5	0.7	0	0	2
B-767-200	2	9.5	0.7	0	0	0
DC-9-30	2	9.5	0.7	1	0	0
Single Engine	1	6.0	0.3	5	7	8
Multi Engine	2	6.0	0.3	1	2	2
Turbo Prop	2	9.5	0.5	0	1	1
Turbo Fan	2	6.0	0.4	1	1	1

Source: U.S. EPA, 1985, AP-42, Table II-1-3. (Taxi/Idle out times reduced in half to reflect operation at smaller, less congested airport.
Minimum taxi/idle out time assumed to be 6 minutes.)

TABLE I-23. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE WORST-CASE HOUR EMISSIONS BY AIRCRAFT TYPE - 2014

Aircraft Type	CO			Total HC			Emissions, (lb/hour)			Particulates		
	Idle	Takeoff	Idle	Total	Idle	Takeoff	Idle	Takeoff	Idle	Takeoff	Idle	Takeoff
B-727-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-737-300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-747-400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-757-200	55.76	0.02	22.91	0.01	1.91	31.31	0.77	0.88	0.03	0.03	0.00	0.00
B-767-200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC-9-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single Engine	8.17	3.84	0.28	0.04	0.04	0.04	0.01	0.00	0.00	0.00	0.00	0.00
Multi Engine	3.13	4.32	0.95	0.04	1.85	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Turbo Prop	2.33	0.01	1.83	0.00	0.09	0.06	0.04	0.01	0.00	0.00	0.00	0.00
Turbo Fan	2.22	0.02	0.81	0.00	0.11	0.40	0.04	0.02	0.00	0.00	0.00	0.00
TOTAL	71.61	8.21	26.79	0.09	4.00	31.78	0.84	0.91	0.03	0.03	0.00	0.03

TABLE I-24. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE WORST-CASE HOUR EMISSIONS FROM GROUND OPERATIONS

Year	LTOs	CO	Ground Operation Emissions a, (lb/hour)			
			Total HC	NO2	SO2	Particulates
1994	11030	1.28	0.56	1.61	0.16	0.08
1999	16275	1.90	0.83	2.37	0.24	0.12
2004	18430	2.15	0.94	2.69	0.27	0.13
2014	20960	2.44	1.07	3.05	0.31	0.15

Note: a. Ground operation emissions for the Minor Aircraft Maintenance Operations Alternative at Chanute AFB are calculated by multiplying ground operation emissions at known facilities times the ratio of LTO cycles for the two reuse scenarios. Aircraft ground operation emissions are assumed to be: CO = 1.12 ton per year, Total Hydrocarbons = 0.49 tpy, NOx = 1.40 tpy, and Particulates = 0.07 tpy. These emissions are based on 8,778 LTO cycles. (The emission rate for the worst-case hour is assumed to be 4 times the average hourly emission rate.)

TABLE I-25. EMISSION RATES USED FOR MODELING OF MINOR AIRCRAFT MAINTENANCE ALTERNATIVE WORST-CASE HOUR - 2014

Source No.	Emission Rate, (g/sec)				
	CO	Total HC	NO2	SO2	Particulates
1-3	3.11	1.17	0.296	0.048	0.007
4-9	0.172	0.002	0.667	0.019	0.001

TABLE I-26. MINOR AIRCRAFT MAINTENANCE ALTERNATIVE MODELING RESULTS

Pollutant	Maximum One-Hour Concentrations by Year, (ug/m ³)			
	1994	1999	2004	2014
CO	295.6	459.9	972.9	991.3
Total HC	67.7	122.00	365.6	371.6
NO2	50.3	79.3	99.6	109.2
SO2	7.7	11.6	15.3	15.6
Particulates	2.6	3.9	2.2	2.2

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APPENDIX J

APPENDIX J

VILLAGE OF RANTOUL POSITION STATEMENT, CHANUTE REUSE, INFRASTRUCTURE TRANSFER AND RESPONSIBILITY

RESOLUTION NO. 3-91-374

A RESOLUTION
APPROVING A POSITION STATEMENT

Attachment A

BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES
OF THE VILLAGE OF RANTOUL, CHAMPAIGN COUNTY, ILLINOIS, as
follows:

1. That a VILLAGE OF RANTOUL POSITION STATEMENT,
CHANUTE REUSE, INFRASTRUCTURE TRANSFER & RESPONSIBILITY (the
"Position Statement"), a copy of which said Position Statement is
attached hereto and hereby incorporated by reference, be and the
same is hereby adopted and approved as the position of the
President and Board of Trustees of the Village of Rantoul,
Champaign County, Illinois (the "Village") with respect to the
matters contained therein.

2. That, from and after the adoption of this
Resolution, the President of the Board of Trustees of the Village
and such other officers, agents and employees of the Village,
including its Engineers and Attorney, are hereby authorized,
empowered and directed to do all such acts and things and to
execute all such documents and instruments as may be necessary to
carry out the intent and accomplish the purposes of this
Resolution and to comply with and make effective the provisions
contained in the Position Statement.

PASSED and APPROVED this 12th day of March, 1991.

Fay G. Podagrosi

President

ATTEST:

Donald C. Key

Village Clerk

**VILLAGE OF RANTOUL POSITION STATEMENT
CHANUTE REUSE
INFRASTRUCTURE TRANSFER & RESPONSIBILITY**

General Position Re: Utilities and Streets

The Village of Rantoul is willing to accept responsibility for the appropriate public portions of the streets, water, sanitary sewer, storm sewer and electric systems provided:

1. The Air Force conveys to the Village the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village,
2. The Air Force will cooperate with the Village in the public benefit transfers that the Village deems appropriate for the overall good of the community, and as recommended under the EDAW, ULI and CMT studies, and
3. The Air Force will participate in the support of the systems as detailed in the following individual descriptions.

Water, Storm Sewer, Sanitary Sewer and Electric Systems

The Air Force agrees to support the operation of each of these systems by paying a user fee for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force properties. This fee will be based upon the Village's estimated annual operation and maintenance cost for the on-base system, with a credit based upon the level of reuse that occurs. In the case of the wastewater system, the user fee will be determined in accordance with the conditions of the contract between the Village and Air Force.

Steam System

The Village is not prepared to accept responsibility for any portion of the steam plant or the steam distribution system. The Air Force should provide a caretaker operation for the complete steam system

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for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force's buildings, to allow time for the conversion of all buildings to individual HVAC systems. The Air Force shall maintain responsibility for the steam plant and distribution system, and shall properly dispose of the facilities when no longer needed.

If the Air Force chooses to sell the water, sanitary, or storm system to a third party, the Village will consider that organization a franchisee of the Village. No water or sewage treatment facilities, not owned by the Village, will be allowed to operate within the Village limits. The Village assumes that they will become the owner and operator of the public portions of the electric system.

Other Considerations

1. Civil Engineers Office, computer system and records - The Village is requesting Bldg. 56 (former base C.E. office), including all records, drawings, reports, etc. Also included is the WIMS system, including any proprietary computer hardware and software.
2. Fire Station and Equipment - The Village is requesting Bldg. 43 and all equipment.

Position Statement Rantoul Municipal Landfill

The Village of Rantoul's closure/post-closure plan under the Village's Illinois EPA permit to operate the Rantoul Municipal Landfill stipulates that the landfill will close April 1, 1995. This plan assumes no material increase in the amount or quantity of solid waste delivered to such landfill between the present time and such date. The President and Board of Trustees of the Village of Rantoul will adopt appropriate legislation consistent with such IEPA permit to restrict the quantity or amount of solid waste delivered to the Rantoul Landfill.

MARCH 12, 1991

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APPENDIX K

APPENDIX K

PUBLIC COMMENTS AND RESPONSES

INTRODUCTION

The Air Force has complied with the National Environmental Policy Act (NEPA) mandate of public participation in the environmental impact analysis process primarily in two ways:

- A public hearing was held in Rantoul, Illinois, on 27 March 1991, at which the Air Force presented the findings of the Draft EIS (DEIS) for disposal and reuse of Chanute AFB and invited public comments.
- The subject DEIS was made available for public review and comment in March-April 1991.

Public comments received both verbally at the public meeting and in writing during the response period have been reviewed and are addressed by the Air Force in this Appendix.

ORGANIZATION

This Public Comment and Response Appendix is organized into several sections, as follows:

- This Introduction, which describes the process, organization, and approach taken in addressing public comments, as well as a brief summary of the comments received
- A consolidated comment-response document
- An index of commenters
- Photocopies of all written comments received
- A transcript of the public hearing.

These sections are described below.

Comments received that are similar in nature or address similar concerns have been consolidated to focus on the issue of concern, and a response is provided that addresses all of the similar comments. Some comments simply state a fact or an opinion, for example, "the DEIS adequately assesses the impacts on [a resource area]." Such comments, although appreciated, do not require a specific response and are not called out herein. The comments and responses are grouped by area of concern, as follows:

- | | |
|-----|---|
| 1.0 | Purpose and Need for Action |
| 2.0 | Description of Proposed Action and Alternatives |
| 3.0 | Land Transfer/Disposal |
| 4.0 | Local Community |
| 5.0 | Land Use/Aesthetics |

6.0	Transportation
7.0	Utilities
8.0	Hazardous Materials/Waste Management
9.0	Geology and Soils
10.0	Water Resources
11.0	Air Quality
12.0	Noise
13.0	Biological Resources
14.0	Cultural Resources
15.0	Socioeconomics

Within each area, each consolidated comment-response is numbered sequentially. For example, under 7.0 Utilities, individual comments-responses are numbered 7.1, 7.2, etc. At the end of each numbered comment is a set of numbers that refer to the specific comment in the documents received that were combined into that consolidated comment. The numbers of the individual comments are indicated in parentheses, e.g. (6-8, 11-13, 15-6, 15-22). Comment 6-8, for example, refers to document 6, comment number 8. A reader who wishes to read the specific comment(s) received may turn to the photocopies of the documents included in this appendix. Below each comment number is the number of the consolidated comment in which the specific comment has been encompassed, e.g. 7.5. Thus, the reader may reference back and forth between the consolidated comments-responses and the specific comment documents as they were received.

Oral comments received at the public meeting are not numbered because corresponding written comments were received from the persons who spoke at the public meeting; the comments in the written document are referenced. The verbal comments made at the public hearing are included in the transcript provided at the end of this appendix.

It should be further noted that some comments in the documents received are not included in the consolidated comment-response document. These comments fall into two categories:

- Comments to which no response is required, as explained above
- Comments regarding the *Socioeconomic Impact Analysis Study (SIAS)*.

The SIAS is a companion document to the EIS. Effects upon the physical or natural environment that may result from projected changes in certain socioeconomic factors that are associated with or caused by the disposal or reuse of the base are addressed within this EIS. Other socioeconomic issues, such as the region's employment base, school budgets, municipal/state tax revenues, municipal land planning, medical care for military retirees and dependents, local governments and services, real estate, and economic effects on utility systems and specific businesses are beyond the scope of NEPA and

Council on Environmental Quality requirements. Analysis of impacts associated with these issues is provided in the SIAS; that public document will also support the base reuse decision-making process. The environmental impact analyses presented in this EIS are based on the results of the socioeconomic analyses described in detail in the SIAS. All comments pertaining solely to issues addressed in the SIAS were considered beyond the scope of this EIS, and so are not addressed in this comment and response appendix. However, those comments have been reviewed and, where appropriate, the text of the SIAS has been revised. Comments concerning socioeconomic issues addressed in the SIAS only are indicated with an S on the photocopies of the comment documents. Comments related to socioeconomic factors that are addressed in this EIS (e.g., population, employment) have been included in this comment-response appendix.

Finally, it should be emphasized that not only have responses to EIS comments been addressed in this comment-response appendix, as explained, but the text of the EIS itself has also been revised, as appropriate, to reflect the concerns expressed in the public comments.

The list of commenters includes the name of the commenter, the identifying document number that has been assigned to it, and the page number in this appendix on which the photocopy of the document is presented. One of the documents received contains a number of attachments, which are comments from other writers. The names of these commenters are listed under the name of the author of the primary document.

SUMMARY OF COMMENTS RECEIVED

The major comments received on the DEIS are as follows:

- The treatment of short-term impacts of base closure was considered to be inadequate.
- The treatment of socioeconomic impacts was considered insufficient.
- The reuse schedule assumptions are not considered very realistic regarding rapidity of growth.
- It is emphasized that the Air Force should clean up contaminated sites before transferring ownership.
- Problems associated with low flows to the Rantoul Wastewater Treatment Plant must be addressed.
- Asbestos both in buildings to be demolished and those that will remain must be managed in a way that minimizes or eliminates health risks.
- Effects of reuse construction and operations activities on wetlands and water bodies on and near the base must be described.

- Use of hazardous materials both before and after closure raises concerns about contamination risks.
- Reuse activities will result in a loss of prime farmland.
- Landfills must be identified that will accept demolition and construction debris.
- Concern was expressed about who will assume responsibility for utility systems on base and in Rantoul after closure.
- The Air Force is required to continue coordination for the evaluation of eligibility of historic structures on Chanute AFB.

1.0 PURPOSE AND NEED FOR ACTION

1.1 **COMMENT:** The documents portray a post closure scenario of little or no economic impact on the Village. The information presented and the language used downplay the negatives and highlight the positives. The commenter protests the use of a closure baseline. The Air Force is using the statistics to develop a preferred analysis. A preclosure comparison would show the environmental and economic impacts more accurately. (11-11, 11-12, 11-31, 15-5)

RESPONSE: The present document addresses potential environmental impacts associated with disposal and reuse of Chanute A. F. B. The decision to close the base has been made; the pending decision by the Air Force is disposal and reuse. The Air Force prepared a Closure EIS, which was filed with the EPA in February 1990. Therefore, the present document assumes a baseline of at-closure conditions against which to assess impacts of disposal and reuse activities. Preclosure conditions are addressed in the present document where appropriate to aid in comparison of impacts. There has been no attempt by the Air Force to highlight either the positive or negative effects of disposal and reuse in this EIS. Reference Sections 1.2 and 3.1 of the EIS for a fuller discussion of the purpose and scope of the disposal and reuse EIS.

1.2 **COMMENT:** The reports do not address the short-term environmental and economic impacts of base closure. The community is more concerned with the immediate future rather than the distant future. The summaries and tone of the reports should be revised to show the truly negative impacts the community will suffer in the short-term (1993 to 1997). (10-4, 11-39, 15-1, 15B-3, 15B-22)

RESPONSE: Where applicable in the environmental impact analysis, the text has been revised to distinguish between short-term and long-term impacts. See the response to comment 1.1 regarding the tone of the EIS, and the response to comment 1.3 regarding socioeconomic impacts.

1.3 **COMMENT:** There is concern with attempts to separate environmental and socioeconomic impacts. This is an artificial if not impossible division. (10-1)

RESPONSE: Effects upon the physical or natural environment that may result from projected changes in certain socioeconomic factors that are associated with or caused by the disposal or reuse of the base are addressed within this EIS. Other socioeconomic issues, such as the region's employment base, school budgets, municipal/state tax revenues, municipal land planning, medical care for military retirees, and dependents, local governments and services, real estate, and economic effects on utility systems and specific businesses are beyond the scope of analysis required by the NEPA and CEQ regulations. Detailed analysis of socioeconomic impacts associated with these issues is provided in the *Socioeconomic Impact Analysis Study*; that public document will also support the base reuse decision-making process. The environmental impact analyses presented in this EIS are based on the results of the socioeconomic analyses fully described in the *Socioeconomic Impact Analysis Study*.

- 1.4 **COMMENT:** The environmental and socioeconomic impacts under minimal use conditions (No-Action) are hardly addressed. Revisions should be made to reflect the long term impacts under the no-action alternative. (3-6, 3-30, 15-3, 15B-1, 15G-1, 15G-2)
- RESPONSE:** There is an extensive discussion of the impacts under the No-Action Alternative on Chapter 3, Affected Environment.
- 1.5 **COMMENT:** Table S-1 of the DEIS Identifies the Proposed Action as having a population increase of 5,790 in Rantoul using "1993 closure" baseline. However, Table 4.1-3 of the Socioeconomic Study indicates a population increase of 1,580 in Rantoul from 1993 levels. (3-5)
- RESPONSE:** The indicated value of 5,790 persons in Rantoul as cited in the DEIS is rounded up from the value of 5,788 shown for the year 2014 in the SIAS. The commenter attempts to compare this amount to the calculated difference between 5,788 and 4,208, the value shown for Rantoul in 1993 in SIAS Table 4.1-3. This latter value includes residual base operations, however, and should not be used for such a comparison. The narrative has been modified to clarify the information presented in the document.
- 1.6 **COMMENT:** The baseline used for impact assessment in the DEIS must be clear, and a consistency between the baseline used in the DEIS and that used in the Socioeconomic Impact Analysis Study be established. (3-29)
- RESPONSE:** A baseline of projected conditions at closure has been established and is used consistently in both the DEIS and the Socioeconomic Impact Analysis Study. The text of the EIS has been revised to clarify the description of the baseline used (see Section 3.1).

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 **COMMENT:** Alternative use plans are submitted for consideration.

- The Octave Chanute Museum and Conference Center
- The Williamsburg of the Midwest
- The Rantoul Technology Assessment Center
- C&S Sanitary Co. Transfer Station.

These alternatives should be studied to preclude the need for an additional EIS later. (15-10, 15G-4, 15G-5, 15G-6, 15G-7, 15G-8, 15G-9, 15G-10, 15H-1)

RESPONSE: The reuse plans evaluated in the EIS were those identified during the scoping period and determined to be the most reasonable and economically feasible options for reuse of the Chanute AFB property. After review of the subject plans, it has been determined that these proposals could be accommodated within the overall scope of the alternatives evaluated in the EIS, with only minor adjustments in the boundaries of the use areas. The uses proposed in the Museum and Conference Center Plan - commercial, residential, recreational, educational - are included in all of the reuse plans evaluated, and thus would be compatible. However, it should be noted that the market analysis conducted as part of the evaluation of alternatives indicated that there would be insufficient demand for additional hotel facilities in the area. Although the market analysis conducted as part of the evaluation of alternative reuses indicated that the local market could support only limited retail development, commercial uses - such as those proposed for the "Williamsburg of the Midwest" - were studied in all of the reuse plans. Additional parking areas may need to be developed to support such use. Similarly, all of the plans include educational uses, so the Technology Assessment Center would also be a compatible use, and no additional environmental impact analysis is necessary. The proposed reuse by C&S Sanitary Co. for a transfer station, shop, and office would be compatible with the proposed aviation support (industrial) or agricultural reuses identified for this location. This reuse would generate some minor traffic, and some of the roads might have to be upgraded to support the weight of the trucks.

2.2 **COMMENT:** The documents are overly ambitious native to expected growth. It is not realistic to assume all three components in the Proposed Action (aircraft maintenance facility, education, and medical) will be accomplished simultaneously. (15-2, 15B-16)

RESPONSE: The Air Force worked with the Village of Rantoul, the FAA, and the IDOT in developing projected reuse plans and schedules. The simultaneous accomplishment of all three components is possible and, as such, is addressed in this EIS. The EIS studied the impacts of the full range of growth potential to allow the decision-maker to understand the full range of possible environmental impacts. More information about economic growth and assumptions is provided in the Socioeconomic Impact Analysis Study.

- 2.3 **COMMENT:** The condition and maintenance of the golf course is not addressed under the no-action alternative. (15G-3)

RESPONSE: Under the No-Action Alternative, the golf course will be maintained in such a manner as to facilitate economical resumption of use. The text has been revised accordingly (see Section 2.3.3).

- 2.4 **COMMENT:** The commenter expresses a need to retain open spaces and buffer zones as future public areas. (15E-1)

RESPONSE: Open spaces and recreation areas are components of all reuse alternatives and have been incorporated into the environmental analysis.

- 2.5 **COMMENT:** Concerns are found in the community's perception of "caretaker status" and how it will affect the appearance and marketability of base properties. What does the caretaker status involve? (10-3, 15-12)

RESPONSE: The conditions of caretaker status are presented in the EIS in Section 2.3.3, No-Action Alternative. These conditions, as stated, reflect the current Air Force conception of caretaker status.

- 2.6 **COMMENT:** The information provided in the "Environmental Study for the Conversion of 345 Acres of Agricultural Land Adjacent and Directly East of the Chanute Air Force Base for Development and the Associated Roadway Work" should be incorporated in the FEIS. (3-2)

RESPONSE: Information provided in this document has been incorporated into the EIS, as appropriate.

3.0 LAND TRANSFER/DISPOSAL

- 3.1 **COMMENT:** The DEIS does not indicate that the Air Force will demolish and clean up certain buildings requested by the commenter. The document should be revised to reflect the requests. (11-9, 15-9, 15I-1)

RESPONSE: Some of the reuse options include demolition of some buildings on Chanute AFB. However, it has not yet been decided which buildings will be demolished or that the Air Force will demolish buildings prior to closure. The environmental impacts of any such demolition have been addressed in this EIS, primarily with regard to landfill capabilities.

- 3.2 **COMMENT:** The southeast portion of the base (900 area), has several possible uses other than a firing range. (3-23, 15B-2)

RESPONSE: Concur. The text has been revised appropriately (See Section 2.2.4).

- 3.3 **COMMENT:** The on-base residential zones have many possible uses. Homeless housing is only one of the possible uses for these areas. (15B-5)

RESPONSE: The EIS also suggests that these areas could be used as family housing or housing for students, faculty, and low-income residents (see Section 2.3.2.6).

- 3.4 **COMMENT:** The business community is concerned for the marketability of the Chanute AFB development. The redeveloped property may be less than safe and clean, and prospective purchasers will take this into account. Marketability cannot be separated from environmental concerns. (10-2)

RESPONSE: The commenter identified a problem common to all transfers of properties in today's environmentally sensitive business community. The Air Force will comply with provisions of the Comprehensive Environmental Restoration, Compensation and Liability Act, which requires the United States to provide notice of specific hazardous waste activities on the property and a covenant warranting that "all remedial action necessary to protect human health and the environment with respect to any [hazardous] substance remaining on the property has been taken before the date of transfer." The covenant must also warrant that "any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States." In addition, the Air Force intends to make available to prospective purchasers all available information necessary to make informed judgements about the existence of unregulated materials and the costs necessary to mitigate any hazard they may pose. The availability of such information along with the continuing responsibility of the United States for subsequent remediation should make properties on Chanute AFB as attractive as private commercial property.

- 3.5 COMMENT: All IRP sites should be remediated before final transfer of the property is completed. (5-11, 11-23)

RESPONSE: The Air Force will comply with the provisions of the Comprehensive Environmental Restoration, Compensation and Liability Act, Section 120, which now requires the United States to provide a covenant in the deed warranting that "all remedial action necessary to protect human health and the environment with respect to any [hazardous] substance remaining on the property has been taken before the date of transfer."

- 3.6 COMMENT: Transfer of ownership of land and facilities - including the airfield and associated areas/facilities and the fire/crash/rescue training facilities - at no cost public benefit transfer, or minimal cost to the interested party, is strongly urged. (2-1, 2-2, 4-1)

RESPONSE: As stated in Section 2.1 of the EIS, disposal methods permitted by federal property management regulations include transfer to another federal agency, negotiated sale to state or local government, and public sale by auction or sealed bid.

4.0 LOCAL COMMUNITY

- 4.1 **COMMENT:** How was the baseline population estimate arrived at and is it an accurate reflection of closure conditions. The analyses from the baseline used appear to be inaccurate. (11-14, 15B-18)

RESPONSE: The baseline population used to develop the information summarized in EIS Table S-1 is the site-related population projected for the No-Action Alternative — zero. The EIS does not contain estimates of the total population of Rantoul under this No-Action Alternative, but this value may be inferred by subtracting the 8,038 persons who lived in Rantoul in 1990 as a result of base operations from 17,212 (1990 Census estimate), it follows that the Village population would have been 9,174 without the base in 1990. The text has been revised to identify the regional population without Chanute AFB (see Section 3.2.1).

- 4.2 **COMMENT:** The use of several employers listed as being located within the Village of Rantoul is incorrect. There is concern that inclusion of these companies may result in misleading employment statistics. (3-8, 15-6, 15B-6, 15B-17)

RESPONSE: The text has been revised appropriately (See Section 3.2.1).

- 4.3 **COMMENT:** The assumption cannot be made that unemployed residents will stay in the area waiting to be rehired. (15B-23)

RESPONSE: There was no assumption that unemployed residents would remain in the area waiting to be rehired. The socioeconomic projections are based on a model that considers outmigration.

5.0 LAND USE/AESTHETICS

- 5.1 **COMMENT:** There is a question concerning the nature of the land use conflict adjacent to the residential area in the northeast corner of the base. (15B-10)
- RESPONSE:** As presented in the text (see Section 4.2.2.1), the eastern border of the new residential area may be incompatible with the aviation support land use because of visual effects and daytime and nighttime activities of the aircraft maintenance facility.
- 5.2 **COMMENT:** The direction of drainage for off-base property north of the base is to the east, northeast rather than to the southeast. (15F-1)
- RESPONSE:** The text has been revised appropriately (See Section 3.2.3.1).
- 5.3 **COMMENT:** Commenter mentioned that the air park is a significant man-made feature, and one of the largest static aircraft displays in the U.S. This display is visible from U.S. 45. (15B-7)
- RESPONSE:** The text has been revised appropriately (See Section 3.2.3.2).
- 5.4 **COMMENT:** Some relevant federal, state, and local statutes, regulations, and guidelines are missing from Table 1.5-1. (3-7, 6-3, 11-18).
- RESPONSE:** The text has been revised appropriately (see Table 1.5-1).
- 5.5 **COMMENT:** Revisions to the Airport Layout Plan should be included in the EIS. (3-1)
- RESPONSE:** The FEIS reflects the version of the Airport Layout Plan current at the time of report production.
- 5.6 **COMMENT:** A small amount of land identified for aviation support on a figure is referred to as a large amount in the text. (3-9)
- RESPONSE:** The text has been revised appropriately (see Section 3.2.3.1).
- 5.7 **COMMENT:** Suggested revisions to the required avigational easements for runway 18/36, to include mention of FAR Part 77 Regulations. (3-17)
- RESPONSE:** The text has been revised appropriately (see Section 4.2.2.1).
- 5.8 **COMMENT:** The potential conflict between abandoned buildings at the old Main Sewage Treatment Plant and the east-west runway clear zone should be addressed in the EIS. (11-10)
- RESPONSE:** The text has been revised appropriately (see Section 4.2.2.1).

6.0 TRANSPORTATION

- 6.1 **COMMENT:** The commenter indicated the short line railroad has not been entirely abandoned. (15B-24)

RESPONSE: The text has been revised appropriately (see Section 3.2.4.5 and Figures 3.2-6 and 3.2-7).

- 6.2 **COMMENT:** The projected number of trips per employee for the reuse alternatives should be explained in the EIS. (3-4)

RESPONSE: The ratios of trips per employee cited in the comment do not appear either in the DEIS or the SIAS; they may have been calculated by the commenter from other values that do appear. Nevertheless, it is reasonable to expect a higher ratio to apply to the Minor Maintenance Facility Alternative than to the Proposed Action, because the Proposed Action includes a higher proportion of aircraft maintenance employees compared to education/medical employees. Schools and hospitals would generate greater numbers of trips per employee than would aircraft maintenance, simply because the students and patients contribute to total trips. As clarification, the methodological description in the DEIS for transportation has been changed to note the importance of students and medical patients to the calculations (DEIS, Section 4.2.3).

- 6.3 **COMMENT:** The V in VORTAC refers to "very high", not visual. (3-10)

RESPONSE: The text has been revised appropriately (see Section 3.2.4.2).

- 6.4 **COMMENT:** The aviation reuse alternatives would likely result in an increase in use of local rail and passenger air travel service and the No-Action alternative would likely result in a reduction of passenger air travel service. (3-19)

RESPONSE: As stated in Section 4.2.3 of the EIS, there would be increases in air and rail transportation under the aviation reuse alternatives as a result of the overall population increase in the ROI over closure conditions. Because the baseline assumed is closure conditions, there is no projected change in air and rail transportation under the No-Action Alternative.

- 6.5 **COMMENT:** These appears to be an inconsistency in predicted AADT on Township Road 1800 East for 2014 between the DEIS and the socioeconomic report. (3-20)

RESPONSE: No inconsistency exists; both the DEIS (page 4-15, third paragraph) and the socioeconomic report (page 4-24, first paragraph) predict an AADT of 10,000 on Township Road 1800 East in 2014.

- 6.6 **COMMENT:** The source of Willard Airport passenger-per-capita in 1988 should be referenced. This also raises the question of whether Willard Airport has sufficient capacity to expand. (3-21)

RESPONSE: The text has been revised appropriately (see Section 4.2.3.1). None of the alternatives addressed herein is projected to result in an increase in passengers through Willard Airport that would require expansion.

PUBLIC COMMENTS AND RESPONSES

- 6.7 **COMMENT:** The roadway analysis in the DEIS concludes that Maplewood Drive and Chandler Road would have only marginally acceptable peak-hour traffic conditions by 1999 under the Proposed Action. Intersection capacity and roadway capacity should be studied to determine anticipated impacts. (3-3, 15B-25)

RESPONSE: Intersection analysis has not been a part of any volume capacity ratio studies for any key community roadways because (1) no intersection data are available and (2) such analysis is considered beyond the scope of base disposal and reuse traffic analysis.

- 6.8 **COMMENT:** The widening of U.S. 136 should be mentioned with regard to off-base road expansion. (3-18)

RESPONSE: The text has been revised appropriately (see Section 4.2.2.1).

7.0 UTILITIES

- 7.1 **COMMENT:** Assumptions listed in analyzing the potential effects on utilities anticipates the Village will assume the responsibility of all utilities except the natural gas system and possibly the steam plant. Are these assumptions correct? The cost of maintaining these systems will be a great burden on Rantoul. (15D-1)

RESPONSE: The assumption that the Village of Rantoul would assume responsibility for the drinking water, wastewater, and electric systems was based on desires expressed by Village officials and because these services are typically provided by the local government or quasi-government entities. Although it was not necessary to make any assumptions concerning who would provide these services, it was necessary to assume that these services would be available for redevelopment. Based on this assumption, the analysis addresses anticipated demands, environmental impacts, and related issues. The cost of operating and maintaining the present utility systems was not addressed and is beyond the scope of an environmental impact analysis.

- 7.2 **COMMENT:** Minimal space heating for structures on base will be provided at closure. For how long will this be maintained? (11-22)

RESPONSE: Minimal space heating will be maintained for 1 year. After the first year, the Air Force will evaluate the requirement for future heating.

- 7.3 **COMMENT:** The Village landfill will close in 1995, if current levels are maintained. The latest possible closure date is 1998. The Rantoul landfill should be deleted from the list of landfills available to receive closure materials, including demolition debris. Further research should be done to insure other landfills in the region will accept demolition debris. (11-42, 11-45, 15-7, 15B-4, 15B-19, 15B-26)

RESPONSE: The text has been revised (see Sections 3.2.5.3 and 4.2.4) to address the fact that the Rantoul landfill will not be accepting demolition debris in the next few years and will be closing in 1995. Alternative landfills that could accept this debris have been identified in the EIS.

- 7.4 **COMMENT:** The issue of problems associated with the wastewater treatment plant (WWTP) is not adequately addressed in the EIS. Modifications to the facility will be necessary to accommodate flow reductions under all future conditions. The additional design capacity of the WWTP was built in to accommodate Chanute AFB. None of the alternatives will produce flows high enough to eliminate low flow problems. Assurances must be provided that water quality in all affected waters will continue to meet standards. All sections in the documents relating to wastewater treatment should state this situation. (5-2, 11-1, 11-15, 11-19, 11-21, 11-32, 11-40, 11-43, 11-44, 11-46, 11-47, 14-1, 15-8)

RESPONSE: The Air Force is actively discussing funding of an engineering solution to the impacts on the Rantoul WWTP resulting from reduction in wastewater flows following base closure. As is acknowledged in the DEIS, reduced flows will adversely impact the efficiency of the Rantoul WWTP and pose the possibility that the plant will violate its National Pollutant Discharge

Elimination System (NPDES) permit. The text in Sections 3 and 4 of the DEIS has been changed to ensure that environmental impacts of reduced flow and a range of possible mitigation measures are adequately addressed. The Village of Rantoul has requested Air Force assistance in financing the proposed modifications and negotiations toward that end are continuing.

- 7.5 **COMMENT:** The Village of Rantoul will not assume responsibility for the steam plant as stipulated in the Village's Position Statement. (11-41, 15B-11, 15B-21)

RESPONSE: The text has been revised appropriately (See Section 4.2.4).

- 7.6 **COMMENT:** Depressurized water lines cannot be connected to the Village's water distribution system. These lines would be in violation of cross-connection control ordinances and regulations in that they may provide a source of contamination to the system. (11-20)

RESPONSE: The text has been revised appropriately (See Section 2.3.3).

- 7.7 **COMMENT:** There is concern that a proportionate number of young people will leave upon closure and will affect the per capita usage of utilities. (15B-20)

RESPONSE: The average per capita rate of utility usage indeed may change as noted if there are changes in the age cohorts of the Rantoul population or for other reasons. However, the ability to assess this change would depend on obtaining a substantial amount of presently unavailable information, including average utility usage rates for different segments of both the existing and projected Rantoul population. Although utility usage is partly dependent on the individual habits and tendencies of users, it is also dependent on the particular characteristics of the existing structures in the community (e.g., amounts of insulation, types and conditions of plumbing facilities) and the relative levels of utility demand by residential, commercial, and industrial users. The basic assumption that post-closure per capita utility usage rates will remain at approximately the same levels as pre-closure is considered a relatively cautious assumption, given that the ratio of the larger commercial and industrial users may increase. The results of the study should be understood to be reasonable approximations of potential future utility usage in the Rantoul area, given the level of available information.

- 7.8 **COMMENT:** The central plant mentioned in the DEIS is coal-fired. We suggest that this plant be converted to another fuel such as oil or natural gas to improve air quality. Should new facilities be constructed, an investigation should be made as to possible energy conservation measures. New structures should be insulated with superinsulation and the use of "Greenlights" (energy efficient lighting) should be implemented. (5-8)

RESPONSE: All decisions regarding energy use (coal vs. gas, conservation measures, insulation, lighting) would be the responsibility of the new owner/user(s) of the base property.

- 7.9 **COMMENT:** The commenter provided the Village of Rantoul Position Statement, Chanute Reuse, Infrastructure Transfer and Responsibility and requested that it be included in the EIS. (11-8, 11-13, 15A-1)

RESPONSE: This document has been included as Appendix J in the EIS.

8.0 HAZARDOUS MATERIALS/WASTE MANAGEMENT

- 8.1 **COMMENT:** What is to happen to USTs under the alternatives other than the proposed action? The commenter requests that all USTs be removed prior to closure, or replaced with new systems that can meet future regulations. (11-5, 11-16, 11-17, 11-25)

RESPONSE: The Air Force's present plan calls for removal of all USTs prior to base closure. The text has been revised appropriately (see Section 3.3.4).

- 8.2 **COMMENT:** Asbestos and radon statutes or regulations that are approved prior to closure should be applicable to the base disposal. (15B-14)

RESPONSE: Concur.

- 8.3 **COMMENT:** Is a reference to the asbestos abatement plan adequate to fulfill Air Force Policy for asbestos management at closing bases? The commenter believes that the EIS should reflect the ramifications of what is and isn't removed under the asbestos abatement plan. (11-3, 11-38)

RESPONSE: A copy of the Air Force policy on management of asbestos at closing installations is included as Appendix G of the EIS. This policy clearly sets forth the considerations involved in deciding whether to remove asbestos or transfer the building with asbestos in place. This policy is consistent with the findings of the U.S. EPA in its study of the asbestos problem in public and commercial buildings. The U.S. EPA declined to promulgate a standard because of the limited risk posed by asbestos incorporated into buildings, the prohibitive costs of removing such asbestos, and the environmental impact of properly disposing of the waste. The impact that adherence to the Air Force asbestos policy will have on the market value of affected buildings is beyond the scope of this environmental analysis.

- 8.4 **COMMENT:** Is the economic analysis part of the asbestos abatement plan? Will the economic policy for asbestos removal be fully implemented and if so, when will the economic analysis be completed? (11-4, 11-36)

RESPONSE: Refer to response to comment 8.3.

- 8.5 **COMMENT:** Does the asbestos management policy apply to buried steam lines? If so, when will these lines be removed? (11-2, 11-37)

RESPONSE: The Air Force policy on management of asbestos at closing installations applies to buried steam lines. Consistent with Air Force policy, steam lines will be removed if it is determined that the protection of human health requires removal. At the present time, the presence of buried steam lines constructed using asbestos-containing materials does not pose a threat to human health. However, removal of the steam lines would create adverse environmental impacts by posing a risk of emissions of asbestos fibers and unnecessarily using limited landfill space.

- 8.6 **COMMENT:** The Village of Rantoul requests the following hazardous materials summary reports when they become available:
- 1.) The asbestos abatement plan
 - 2.) Remedial Investigation data summary report
 - 3.) Radon survey report
- (11-6, 11-7, 11-24, 11-28, 11-29)

RESPONSE: Copies of the requested documents will be made available in their final format.

- 8.7 **COMMENT:** Is there an appeal process concerning the decisions made under the asbestos policy? If so, procedures for making appeals is requested. (11-35, 15B-15)

RESPONSE: There is no procedure for contesting determinations made by Air Force Bioenvironmental Engineers concerning implementation of the asbestos management policy. However, to the extent individuals believe errors have been made, they may bring those to the Air Force's attention by identifying the determination and its deficiencies and providing data supporting a different conclusion.

- 8.8 **COMMENT:** There needs to be clarification as to how interim users of on-base facilities will be managed including Hazardous Materials/Waste Management. The commenter believes that the Air Force should remain responsible for interim usage. (11-34, 15B-13)

RESPONSE: Any entities entering into a lease for use of Air Force property prior to its final transfer will be responsible for complying with applicable Illinois, federal, and local laws concerning generation, transportation, storage, and disposal of hazardous wastes. The Air Force will ensure that lease provisions provide for ready access by appropriate regulatory authority to any leased facility.

- 8.9 **COMMENT:** Why are some USTs exempt from state and federal regulations? (11-26)

RESPONSE: Federal UST regulations (40 CFR part 280) exempt residential heating oil tanks. Under Illinois regulations, residential heating oil tanks with capacities less than 1,100 gallons are also exempt from regulatory concern, unless the tank systems are known to have leaked to the environment (see Section 3.3.4).

- 8.10 **COMMENT:** What is the basis for the assumption that all existing contamination has been identified? Has the Air Force investigated the allegations that there are other burial sites of hazardous materials and included them in the IRP process? (11-33, 15B-12)

RESPONSE: The statement that all contamination on Chanute AFB had been identified is based on the results of the Installation Restoration Program investigations. In 1983, the initial records search was conducted by Engineering-Science Inc. and included interviews with past and present employees. Additional groundwater sampling was conducted during 1988 and 1989. Groundwater sampling has continued during 1990 and a report concerning these efforts is due in 1991.

The IRP investigations have established the existence of contamination on the base and identified probable sources. Despite extensive groundwater sampling since 1988, no major additional

sources were identified. In addition, the discovery of contaminants has been consistent with expectation based on the records search and employee interviews.

- 8.11 **COMMENT:** The discussion of the Memorandum of Understanding concerning contamination from hazardous substances at Chanute AFB seems out of context. (3-11)

RESPONSE: The text has been revised appropriately (see Section 3.3.3).

- 8.12 **COMMENT:** There should be an investigation of the possibility of expanding existing facilities to meet the needs of increased usage, without disturbing asbestos and creating environmental disposal/remediation. If buildings containing asbestos must be demolished, a landfill permitted to take special wastes should be identified prior to demolition. (5-5)

RESPONSE: An asbestos survey was recently conducted at Chanute AFB; results are pending. Any removal or management of asbestos at the base will be conducted in accordance with Air Force Policy on the Management of Asbestos at Closing Bases (see Appendix G of the EIS). This policy recognizes that "While removal is a remedy, in many cases management alternatives (such as encapsulation within the building) are acceptable and cost effective methods of dealing with asbestos." The policy lists criteria for determining that removal is appropriate, and guidelines for management if removal is not indicated. The policy further states that "friable asbestos will be properly disposed of." If, in fact, demolition debris consisting of asbestos-containing materials must be disposed of, an appropriate landfill will be identified prior to demolition.

- 8.13 **COMMENT:** The DEIS discusses the possibility for the increased use of herbicides and pesticides. Measures should be taken to ensure that water quality is not adversely impacted as a result of increased usage. (5-6)

RESPONSE: The EIS states that all pesticide and herbicide usage is, and will continue to be, conducted in compliance with the FIFRA. This Act regulates quantities and usage of pesticides, herbicides, and rodenticides to assure the health and safety of the public and local wildlife. The text has been revised to include a fuller explanation of the FIFRA (see Section 3.3.6).

- 8.14 **COMMENT:** The DEIS mentions that there are several hazardous waste sites located near wetlands which may currently or in the future impact the quality of these habitats. Coordination should continue concerning potential wetlands impacts at these sites. (5-10)

RESPONSE: Impacts from existing contaminated sites are being addressed by the IRP.

- 8.15 **COMMENT:** Will the above-ground storage tanks be left behind? If so, the economic impact of this decision should be addressed in the socioeconomic analysis. (11-27)

RESPONSE: It has not yet been determined which, if any, of the above-ground tanks will be left in place for reuse. The economic impact of transferring unregulated above-ground tanks is beyond the scope of this environmental analysis.

9.0 GEOLOGY AND SOILS

- 9.1 **COMMENT:** The conversion of prime farmland to non-agricultural uses constitutes a major natural resource impact and it should be addressed accordingly in the FEIS. The acreage and status (prime, important, etc.) of each soil type should be identified for any alternative proposing acquisition of agricultural land. (6-1, 6-2, 6-4, 6-5)

RESPONSE: The text has been revised appropriately (see Sections 4.2.2.1 and 4.4.1).

- 9.2 **COMMENT:** No mention is made of the potential disturbance of subsurface tile drainage systems on agricultural lands with proposed development. (6-6)

RESPONSE: The text has been revised to address this concern (see Section 4.4.2.1).

10.0 WATER RESOURCES

- 10.1 **COMMENT:** It is suggested that a buffer strip of native vegetation at least 100 feet wide be permanently maintained in areas where wetlands and other water bodies may be subject to storm water runoff, to minimize impacts to water quality. (5-1)

RESPONSE: The Air Force does not believe that the creation of permanent 100-foot-wide buffer strips around all on-base wetlands, tributaries, streams, and other water bodies is necessary to protect water quality. Direct impacts on wetlands through dredge and fill activities are managed by the U.S. Army Corps of Engineers and the U.S. EPA through the Clean Water Act Section 404 permitting process. Furthermore, water quality impacts resulting from point source discharges are regulated under the National Pollution Discharge Elimination System (NPDES) permitting process under Section 301 of the Clean Water Act. The Air Force believes that existing regulatory schemes are sufficient to address the concerns expressed by the U.S. EPA. As noted in the DEIS, adverse impacts to these waters during construction will be prevented by the placement of temporary berms.

- 10.2 **COMMENT:** The Final EIS must address the treatment and disposal of wastewater from the industrial and commercial facilities as well as storm water runoff from industrial parking facilities, to avoid impacts to water quality. (5-3)

RESPONSE: It is likely that an NPDES permit(s) would be required for industrial and commercial wastewater discharges. Prior to construction design for reuse activities, a study similar to the Maintenance and Drainage Systems (MUDS) study conducted by the U.S. Army Corps of Engineers (1987) would be conducted to identify potential drainage problems and develop solutions. The solutions would be incorporated into the design and construction of new/modified facilities. NPDES permits may be required for storm water discharges during construction, as well as during airfield operations under the Proposed Action. The text has been revised appropriately (see Section 4.4.2.1).

- 10.3 **COMMENT:** If the tributary to Salt Fork Creek must be rechanneled to accommodate the proposed runway expansion, plans for rechanneling the tributary and mitigating lost habitat must be addressed. If drainage is to be altered, impacts on the aquatic system must be addressed. (5-4)

RESPONSE: The tributary will not need to be rechanneled to accommodate runway expansion because it is not in the extension area. As discussed in response to comment 10.2 above, a drainage study would be conducted prior to construction and any potential impacts to wetlands or surface water would be prevented or minimized by incorporating appropriate mitigation measures (such as berms, drains, culverts, etc.) into the design of new facilities (see Section 4.4.2.1).

Similarly, the mitigation measures discussed in Section 4.4.5.1 would be implemented to minimize impacts to wetlands, aquatic habitat, and any loss of native vegetation. Loss of foraging habitat as a result of runway extension would present only minimal effects on local wildlife, which would be compensated by the large amount of other habitat available in the area and instituting management practices for pheasant.

PUBLIC COMMENTS AND RESPONSES

10.4 **COMMENTS:** The groundwater section should state that there is no aquifer designated by the EPA as a sole or principle drinking water resource. (3-12)

RESPONSE: The text has been revised appropriately (see Section 3.4.2.3)

11.0 AIR QUALITY

11.1 **COMMENTS:** Sections concerning air and water quality construction impacts should mention that aviation development would follow provisions of FAA Advisory Circular 15/5370-10. (3-22)

RESPONSE: The text has been revised appropriately (see Sections 4.4.1.1, 4.4.3.1, and 4.4.3.2).

12.0 NOISE

- 12.1 **COMMENT:** Specific EPA guidelines should be referenced concerning hearing loss. (3-24)
RESPONSE: The text has been revised appropriately (see Section 4.4.4).
- 12.2 **COMMENT:** IDOT suggests that the airport proponent could voluntarily pursue a future FAR Part 150 Study for analyzing operational and facility modifications to reduce noise levels. (3-25)
RESPONSE: The text has been revised appropriately (see Section 4.4.4.1).
- 12.3 **COMMENT:** The measures presented in the DEIS for mitigating effects of noise overflight in the sleep of residents during the summer should be implemented. (5-9)
RESPONSE: No conflicts with the FAA land use compatibility guidelines contained within FAR Part 150 have been identified for the Proposed Action. The airport proponent could voluntarily pursue a future FAR Part 150 study to analyze operational and facility modifications to reduce aviation noise levels below DNL 65 dB.

13.0 BIOLOGICAL RESOURCES

13.1 **COMMENT:** There is concern about potential development and reuse restrictions due to on-base wetlands. What wetland impact and possible restrictions are likely to occur? More detail should be provided so that potential effects can be properly identified within the proposed reuse alternatives. (11-30, 15B-8)

RESPONSE: The range of mitigation measures that may be taken to address wetlands impacts resulting from redevelopment are outlined in Section 4.4.5 of the text. The conceptual nature of redevelopment mandates that, in some cases, specific impacts cannot be described. However, the EIS addresses the Section 404 process of the Clean Water Act in detail. Future landowners would be responsible to comply with the provisions of Section 404 (see Section 4.4.5.1). The economic impact of such measures is beyond the scope of environmental impact analysis.

13.2 **COMMENT:** Field surveys can be conducted as a protection measure for biological resources. Mitigation recommendations and avoiding construction in the southeast portion of the base will help protect wetland areas. (12-1)

RESPONSE: Environmental surveys would be conducted before initiating any activities that could affect wetlands. Mitigation measures will be implemented, as necessary, to comply with federal and state regulations for the protection of wetlands.

13.3 **COMMENT:** American slough grass and Eustoma should be removed from the text. Prairie remnants are not present in the proposed project area. (3-13, 3-14, 3-27)

RESPONSE: The text has been revised appropriately (see Sections 3.4.5, 3.4.5.1, and 4.4.5.1).

13.4 **COMMENT:** Coordination with the Illinois Department of Conservation should be noted with discussion of threatened and endangered species. (3-15)

RESPONSE: Text has been revised appropriately (see Section 3.4.5.3).

13.5 **COMMENT:** The locations of various wetland types discussed should be labeled on the wetlands figure. (3-16)

RESPONSE: Figure 3.4-3 has been revised appropriately.

13.6 **COMMENT:** It would seem appropriate to quantify by type and acreage the loss of vegetation. (3-26)

RESPONSE: Vegetation impacts were not quantified because the analysis is at a programmatic level. The project description did not provide enough detail to establish precise disturbance boundaries on a map so that such losses could be calculated. Further, there are no threatened, endangered, or sensitive species present on base.

- 13.7 **COMMENT:** The landscaping plans discussed in the DEIS concerning reuse should include planting to replace any trees lost to construction. (5-7)

RESPONSE: Although there would be some loss of trees and vegetation as a result of reuse construction activities, there are no sensitive biological resources present on the base that would require compensatory measures (ref. Section 3.4.5). Effects on vegetation from construction loss are considered to be minimal. Landscaping of these areas would be in accordance with the proposed reuse activities and would be the responsibility of the new owner/user(s).

- 13.8 **COMMENT:** It is suggested that buffers between facilities/use areas be connected so that wildlife has a connected corridor throughout the base. Consideration should be given to developing habitats that will support a diversity of plants and animals. (5-12)

RESPONSE: There are no threatened or endangered species or sensitive habitats on Chanute AFB. Based on the absence of sensitive biological resources, the alternatives proposed are those considered the most reasonable and economically feasible. All proposed reuse options incorporate open space and recreational areas, which would support the types of wildlife present. Planting, landscaping, and maintenance of open space and recreation areas will be the responsibility of the new owner/user(s).

14.0 CULTURAL RESOURCES

14.1 **COMMENT:** The commenter requests one copy of each:

- 1.) The determination of eligibility for historical and prehistoric resources on base.
- 2.) The assessment of the effects of the project on cultural resources.
- 3.) The archeological surface surveys of the base.

(15B-9)

RESPONSE: Copies of these documents will be available in their final format.

14.2 **COMMENT:** The procedures concerning cultural resources appear to be adequate. Consultation with the Illinois Historic Preservation Agency concerning cultural resources at Chanute AFB should continue through completion of the FEIS. (7-1)

RESPONSE: Consultation with the Illinois Historic Preservation Agency regarding potential cultural resources at Chanute AFB has been initiated and will continue, in compliance with Section 106 of the National Historic Preservation Act.

14.3 **COMMENT:** "Mitigation," as used in the 106 process, does not alter the evaluation of effect. Effect is either adverse or it is not. If not, mitigation is not required. If potentially adverse, avoidance or mitigation comes into play. (3-28)

RESPONSE: The text has been revised appropriately (see Section 4.4.6).

15.0 SOCIOECONOMIC

- 15.1 **COMMENT:** A request is made that the Air Force use the same formula used in The Chanute Economic Resource Impact Statement to express the economic effect to the community due to the closing of the base. (15-4)

RESPONSE: The Chanute AFB Economic Resource Impact Statement (ERIS) for FY 1990 indicated that the local economic impact of the base was \$227.6 million that year, and supported 1,934 secondary jobs in the area. The local area to which the ERIS refers encompasses all places within a 50-mile radius of the base, and includes both the Decatur and Bloomington areas as well as parts of Indiana. Corresponding results from the Chanute AFB socioeconomic analysis are regional economic impacts of \$205.1 million in FY 1990 and 1,550 secondary jobs that year. These are comparable results, particularly in view of the fact that the region of influence for the EIS includes only Champaign and Ford counties.

- 15.2 **COMMENT:** There are a number of military retirees (about 5,000) currently receiving health care from the Chanute hospital. The commenter request that consideration be given to retirees who live in the area to receive affordable health care. Keeping outpatient and pharmaceutical services for military retirees would help ease health care costs. (13-1, 15-11)

RESPONSE: Discussion of this issue is beyond the scope of this EIS.

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1 UNITED STATES AIR FORCE
2 PUBLIC HEARING
3 IN THE
4 DRAFT ENVIRONMENTAL IMPACT STATEMENT
5 FOR
6 DISPOSAL AND REUSE
7 OF
8 CHANUTE AIR FORCE BASE

9 Transcript of proceedings held before the
10 Honorable James Heupel, a notary public on
11 Wednesday, March 27, 1991, 7:00 o'clock p.m., at the
12 Rantoul Civic Center, Rantoul, Illinois.

13 HEARING OFFICER:

14 COLONEL JAMES HELPEL

15 PANEL:

16 MR. GENE AEF SKY

17 LT. COL. TOM BARTOL

18 MR. ROBERT ORR

21

22

23

24

1 HEARING OFFICER: Good evening ladies and
2 gentlemen. I want to start off by advising you that
3 the National Environmental Policy Act in implementing
4 regulations require federal agencies to carefully
5 analyze the potential environmental impacts of
6 proposed actions and to use those analyses in arriving
7 at decisions or recommendations on whether and how to
8 proceed with those actions.

9 Now, the Air Force has prepared and
10 distributed in accordance with applicable regulations
11 a Draft Environmental Impact Statement addressing a
12 proposal to dispose of Chanute Air Force Base for
13 reuse as a major aircraft maintenance facility.

14 This proposal would entail redevelopment
15 of Chanute Air Force Base for aviation related
16 activities, education and training, like industrial
17 enterprise, health care and recreation and residential
18 use.

19 Additional elements of the proposed
20 action include proposals for transfer of portions of
21 Chanute Air Force Base to federal agencies in
22 compliance with the Federal Property and
23 Administrative Service Act of 1949.

24 My name is Colonel James Heupel. I'm

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1 the Chief Trial Judge for the Air Force. I'm a
2 full-time military judge for Air Force court martial
3 or criminal trials. I've been designated by the
4 Office of the Judge Advocate General in Washington to
5 act as presiding officer for tonight's public hearing
6 on the Draft Environmental Impact Statement.

7 Now, I'm not here as an expert on this
8 proposal nor have I had any connection with its
9 development. I am not here to act as a legal adviser
10 to the Air Force experts who will address this
11 proposal. My purpose is simply to insure that we have
12 a fair and orderly hearing and that all who wish to be
13 heard have a fair chance to speak.

14 Now, let me just take a moment to
15 explain how tonight's hearing will proceed. This
16 isn't going to be a debate nor a referendum for a vote
17 upon the proposal itself. There will be no
18 demonstrations nor should you signify your agreement
19 or disagreement with the speaker's position by
20 applause or other expressions of approval or
21 disapproval; that adds nothing to the hearing record
22 and simply wastes your valuable time. What may in fact
23 be the only time available for your personal input to
24 our Government's decision making process.

1 What this informal hearing is intended
2 to provide is a public forum for two-way
3 communications with a view to improvement of the
4 overall decision making process.

5 Now, you'll notice that I said two-way
6 communications. Part one of that calls for you to
7 listen carefully to what the Air Force experts say as
8 you're briefed on the proposal, and also upon the
9 proposal anticipated environmental consequences.

10 After the briefing, we'll take a short
11 recess, and then you'll be able to provide comments on
12 any points made in the briefing or in the Draft
13 Environmental Impact Statement, to tell the Air Force
14 experts what you think, to give the Air Force decision
15 makers the benefit of your knowledge of the local area
16 affected by the proposal and any environmental hazards
17 you perceive.

18 I'd like to emphasize, this is a proposal
19 and not something that's already been decided,
20 approved or funded. Our hearing isn't for the purpose
21 of justifying anything but rather to identify and
22 assess pertinent impacts, including your personal
23 perspective as to those impacts.

24 Take notes as you choose during the

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1 briefing, and we've asked you to fill out our comment
 2 cards, our comment sheets. We have the attendance
 3 records, also. We've asked you to indicate down in
 4 the block, make a check mark, if you'd like to make a
 5 public comment here tonight or if you would like to
 6 ask a clarifying question as to something that's been
 7 indicated in the briefing or in the Draft
 8 Environmental Impact Statement.

9 Now, after we've had the presentation by
 10 the Air Force experts, we'll take a recess. I'll get
 11 these cards that you have either filled out or that we
 12 have you fill out at the recess and collect before we
 13 start up again.

14 Then when we start in again, I'll
 15 recognize public officials, elected officials,
 16 representatives of elected officials for the purposes
 17 of making a statement about the proposal, and then
 18 I'll also recognize representatives of groups or the
 19 public at large. And for the latter two groups, I'll
 20 do that by shuffling these cards and taking them in a
 21 random order. So that there is a fair chance for
 22 every one to get their comments in.

23 Now, I just suggest to you, don't be
 24 hesitant or shy about making a statement. This is an

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1 informal hearing, and I want to help insure that all
 2 of those who wish to speak have a fair chance to be
 3 heard.

4 In that regard, I'd ask you to help me
 5 enforce the following ground rules. First, only speak
 6 after I recognize you and please address your remarks
 7 to me, as the Hearing Officer.

8 Second, speak clearly and slowly.
 9 starting out with your full name, address and the
 10 capacity in which you're appearing, that is, as a
 11 public official or a designated representative of a
 12 private association or a person speaking solely in his
 13 or her individual capacity, so that our court reporter
 14 who is here, Ms. Simone Baird, who has to make a
 15 verbatim record of these proceedings, can do her job
 16 professionally. If you can do these things, give her
 17 your name, et cetera, that will assist her.

18 Third, if you have any questions for the
 19 panel or a point that you do not understand, ask one
 20 question at a time when I've recognized you. I'll
 21 allow a reasonable number of questions. But I must
 22 emphasize that questions are to clarify points not
 23 understood. Cross-examination is not appropriate.
 24 This, happily for me, is a not trial. It's refreshing

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1 not to be a criminal trial, rather to be involved in a
 2 process like this. Cross examination isn't not an
 3 appropriate part of the process.

4 Now, the fourth point would be that
 5 statements will be limited to five minutes for
 6 everyone, that includes elected public officials or
 7 their representatives, designated spokespersons of
 8 private groups and private citizens. We need to do
 9 this so that everyone has an opportunity to be heard
 10 and has that fair opportunity to be heard.

11 Now, I'm going to end up being the time
 12 keeper, and I will do that. But I will ask you to
 13 please honor a request from me that you stop speaking.
 14 I'll let you know when the five minutes is up.

15 We have a clock back on the side wall,
 16 but I'm going to be asking you to come up to the
 17 podium when you do speak. Your backs are to that
 18 side. So I'll try to do something like this
 19 (indicating) when the five minutes is up so that
 20 you'll know, and I'll ask you to wrap up your comments
 21 at that point.

22 It may be necessary, for technical
 23 reasons, to change a tape for the reporter or for
 24 video tape purposes to change a tape, and we may need

1 to take a quick break at that point, and then we'll
 2 start you back up so you do not lose any time.

3 The sixth point would be, I'd ask you to
 4 not to speak while another person is speaking, and
 5 I'll only recognize one person at a time. The last
 6 point will be, I see from the sign on the wall that
 7 this is a no-smoking area. So I would appreciate your
 8 cooperation with that rule.

9 Now, it is possible that there will be
 10 questions that Air Force representatives are not able
 11 to answer. That could occur because even though
 12 there's a good deal of expertise assembled here, they
 13 will not attempt to answer questions tonight unless
 14 they're confident that they can do so accurately.

15 Now, if this should occur, they're not
 16 able to answer a question, and if the question is
 17 relevant to the environmental process, I can assure
 18 you that it will be addressed in the final document,
 19 which you may receive a copy of.

20 If we run out of time before everyone
 21 gets to speak, you're invited to fill out a comment
 22 sheet. You can do that even if we have sufficient
 23 time. We have the comment sheets. You can include
 24 additional pages. Some of you may already have some

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1 typed statements or documents that you wish to have
2 considered.

3 You will notice from the pamphlet that
4 we'll be handing out that statements can be submitted at
5 any time prior to the 22nd of April of 1991 by mailing
6 them to the address that's indicated at the bottom of
7 this form or at the bottom of the comment sheet. And
8 statements that are submitted this way will have equal
9 weight and receive the same careful consideration as
10 those statements that are made orally here tonight.

11 I'd like to thank everyone who has
12 turned out. Your presence here is commendable, in
13 that it shows a great interest in your community and
14 in those things that are important to it. Let me
15 insure you that your interest is the primary purpose
16 for us being here tonight.

17 Now, at this time let me introduce the
18 members of the panel across from me. Immediately
19 across from me, on your right, would be Mr. Gene
20 Aefsky, representing the Closure Implementation Office
21 in the Pentagon, and he'll be speaking on the
22 proposal. In the center is Mr. Robert Orr, Special
23 Assistant to the Secretary of the Department of
24 Transportation, whose representing the Federal

1 Aviation Administration, and on your left would be
2 Lieutenant Colonel Tom Bartoli, the Director of the
3 Environmental Division, Air Force Regional Civil
4 Engineer, Norton Air Force Base, California.

5 Now, it's my pleasure to introduce Mr.
6 Gene Aefsky who will brief the proposal tonight.

7 MR. AEFSKY: Thank you, Colonel. My name is
8 Gene Aefsky, and I represent the Office of the
9 Pentagon created to managing the disposal of Air Force
10 bases identified by the Special Commissions appointed
11 under the authorities of two separate Base Closure and
12 Realignment Clauses.

13 In discussing the Air Force's proposed
14 action, I'd like to cover four topics. First is
15 disposal planning. Second, are the objectives used by
16 the Air Force to guidance planning. Third, are
17 disposal considerations that were used to arrive at a
18 decision. Lastly, is the Air Force's decision itself,
19 that is, what actions the Air Force will take based on
20 the findings in the DEIS and other considerations.

21 Our planning is guided by the fact that
22 the Secretary of the Air Force has been delegated the
23 authority to act as the Federal Disposal Agent for
24 Chanute Air Force Base. Usually this responsibility

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1 rests with the Administrator of General Services, but
2 the Base Closure Act of 1988 and 1990 changed the
3 normal procedures.

4 Under the Acts, the Department of
5 Defense assumes GSA disposal role. The Secretary of
6 Defense has, in turn, redelegated his disposal
7 authority of Air Force installations to the Secretary
8 of the Air Force.

9 Despite this change, however, the
10 traditional disposal statute for federal property are
11 still enforced. The Air Force must adhere to the laws
12 and General Services Administration Regulations that
13 are in place at the time of the passage of the Closure
14 Acts. However, the services may issue regulations, if
15 required, to implement their delegated authorities.

16 Another of the provisions of both Acts
17 required us to consult with the state, governor, and
18 heads of local governments for the purpose of
19 considering any plans for the use of such property by
20 the local community concerned. We are meeting the
21 consultation requirements for Chanute Air Force Base
22 by working with the Village of Rantoul and the
23 Illinois Department of Transportation.

24 Finally, our planning recognizes that

1 the Secretary of the Air Force has full discretion in
2 determining how the Air Force will dispose of the
3 property.

4 Next, I'd like to discuss the Air Force
5 objectives for the disposal process. First, in order
6 to insure that the process progresses smoothly, we
7 must develop a comprehensive plan. In developing the
8 plan, we must consider the desires of the community,
9 the environmental consequences of our disposal issues,
10 and the incidental land uses in the interest of the
11 Air Force and the Federal Government as the current
12 owners of the land.

13 Second, Congress is only providing
14 start-up capital for implication of the realignments
15 and closures. Revenues from property sales will be
16 used to offset the short fall. As such, it is
17 important that the efforts sustain itself throughout
18 the life of the Base Closure Account, which terminates
19 in September of 1995.

20 Third, the Air Force wants to ease the
21 transition by streamlining the process so that it
22 proceeds as quickly and smoothly as possible.

23 Now, I'd like to move on to describe how
24 we intend to achieve those objectives. For our

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1 purposes, disposal has been organized to consider five
 2 interrelated documents. The first is the EIS, the
 3 draft of which we're reviewing tonight. The second is
 4 the agreement on how to conduct the environmental
 5 clean-up. Third, is the study of the socioeconomic
 6 impact of the closure and potential reuse, which was
 7 referred to in the first EIS. Fourth, is the reuse
 8 proposal terminated by the local community. Fifth, is
 9 the disposal plan which combines all of the above into
 10 the implementation document needed to execute the
 11 disposal.

12 To insure that proper consideration is
 13 given to all reasonable reuse alternatives in Chanute
 14 Air Force Base, we invited all potential reusers to
 15 submit their proposals. By doing so, they are now
 16 included in the EIS alternatives, other than the
 17 formal community plan, which is featured in the EIS as
 18 a proposed action. With these alternatives, we
 19 believe the final EIS will be comprehensive enough to
 20 support the eventual disposal of the bases.

21 Please note the Secretary of the Air
 22 Force maintains the authority to choose among the
 23 alternatives for the purpose of balancing the needs of
 24 the community, the Air Force and the Federal

1 Government.

2 The action analyzed in the draft EIS is
 3 shown in the slide. The action is to dispose of the
 4 installation and parcels to public or private entities
 5 using the integrative concept plan as a proposed land
 6 use plan.

7 It should be noted that all follow-on
 8 uses will be subsequent to any applicable federal,
 9 state and land use controls, building codes and fire
 10 laws. The action, when complete, results in total
 11 disposal of the installation.

12 The method of disposal will generally
 13 occur in the following order of priority: Transfer to
 14 another federal agency; donation for a public benefit
 15 sale to a public body under special statutory
 16 authority; negotiated sale to a public body; or sale
 17 by public auction and/or bid to private interests.

18 As mentioned, the Secretary of the Air
 19 Force will decide on the actual disposal, and it may
 20 vary from his general order of priority, depending on
 21 the special circumstances involved. Following
 22 completion of the EIS, the decisions will be
 23 documented in a record of decision, and in the Air
 24 Force's Final Disposal Plan for Chanute Air Force

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1 Base.

2 Because the center piece of current
 3 community planning is a development of a national
 4 aviation center, and one of the disposal options the
 5 community may choose as a public benefit transfer
 6 sponsored by the Federal Aviation Administration, the
 7 Air Force's EIS considers the environmental impacts of
 8 the major reuse initiative.

9 Should the community choose this
 10 approach the FAA will require its own environmental
 11 analysis, which may delay the transfer; however, to
 12 insure a coordinated and timely decision and to avoid
 13 any potential delays, the Federal Aviation
 14 Administration, represented by the Illinois Department
 15 of Transportation, is participating in our EIS process
 16 in a formal role, known officially as a Cooperating
 17 Agency.

18 The last subject I'd like to address is
 19 that of environmental clean-up. The Air Force is
 20 committed to cleaning up all areas contaminated by
 21 past Air Force activities and protecting the health
 22 and safety of the public and any future owners of
 23 Chanute Air Force Base property. Interim clean-up
 24 activities are continuing, and additional studies are

1 underway which will fully characterize the
 2 contamination of all other sites to determine the best
 3 means of cleaning them up.

4 The Air Force, the State of Illinois,
 5 and the Village of Rantoul have negotiated a
 6 memorandum of understanding committing the parties to
 7 work together to facilitate the rapid completion of
 8 the environmental clean-up.

9 Meanwhile, clean-up activities are
 10 continuing at this time. Contaminated areas may not
 11 be ready for disposal at the time of closure. Where
 12 needed, the Air Force will obtain ownership of small
 13 parcels containing clean-up sites. In other words, we
 14 may require easements and rights of entry to permit
 15 long-term ground monitoring and treatment.

16 Nevertheless, despite the Air Force's
 17 commitment to cleaning up all past contaminated areas
 18 and protecting the public, we do not expect any
 19 clean-up activities to delay release of uncontaminated
 20 property of Chanute Air Force.

21 Thank you for this opportunity to meet
 22 with you this evening. Now, I'd like to turn the
 23 meeting back to the Colonel.

24 HEARING OFFICER: Thank you, Mr. Aefsky. At

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1 this time, I ask Lieutenant Tom Bartol to brief us on
 2 the environmental process.

3 LIEUTENANT COLONEL BARTOL: Thank you.
 4 Colonel, I am Lieutenant Colonel Tom Bartol, and,
 5 again, our organization is conducting the
 6 environmental impact analysis process for this
 7 proposal as well as for the four other major Air Force
 8 installations mandated to close under the Base Closure
 9 and Realignment Act of 1988.

10 Tonight I'm going to present the
 11 schedule for the environmental process and show how
 12 this public comment period fits into the schedule.
 13 I'll also discuss the scope of the study and the
 14 relationship between the Environmental Impact
 15 Statement and the socioeconomic studies, and then,
 16 lastly, I will present the results of our analysis by
 17 resource category.

18 Now, this environmental effort was
 19 initiated back in February, 1989, with a publication
 20 of the Federal Register of Notice of Intent to prepare
 21 an Environmental Impact Statement for the closure of
 22 Chanute Air Force Base.

23 Following this, scoping meetings were
 24 held in March of 1989, and in February of 1990, a

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1 Draft Environmental Impact Statement was published and
 2 a record of decision in March of 1990. I want to
 3 emphasize that the environmental process completed by
 4 the Air Training Command was for the closure and
 5 realignment of the forces at Chanute Air Force Base;
 6 that process is complete and thus the decision has
 7 been made to close Chanute Air Force Base. The
 8 process we are discussing tonight, the Environmental
 9 Impact Statement, is for the disposal and reuse of the
 10 Chanute Air Force Base.

11 Now, for this process, a scoping meeting
 12 was held back in September of last year, and we
 13 received public input on the issues to be addressed in
 14 the study. During the scoping process, our office
 15 received proposals from the establishment of a
 16 national aviation center with a major aircraft
 17 maintenance hub.

18 As a result of that input, the Federal
 19 Aviation Administration was invited, and they
 20 subsequently agreed to become a cooperating agency in
 21 this environmental process. The Federal Aviation
 22 Administration is being represented by the Illinois
 23 Department of Transportation through the State Block
 24 Grant Program. The Air Force has worked closely with

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1 the FAA and the Illinois Department of Transportation
 2 to include their environmental requirements in this
 3 Environmental Impact Statement.

4 Now, following the scoping period, in
 5 which we received input from the public and reuse
 6 plans from the Village of Rantoul, we collected data
 7 and conducted the environmental analysis. The Draft
 8 Environmental Impact Statement was filed with the
 9 Environmental Protection Agency on March 1st of this
 10 year.

11 Now, in addition to tonight's hearing,
 12 written comments on the draft will continue to be
 13 accepted until April 22nd. After the comment period
 14 is over, we will evaluate the comments, both written
 15 and oral, and perform additional analysis or change
 16 the Draft Environmental Impact Statement where
 17 necessary.

18 Again, this is not scoping process;
 19 equal consideration will be given to all comments
 20 whether we hear them tonight or receive them in the
 21 coming weeks. Once that review process is complete,
 22 we will produce a Final Environmental Impact
 23 Statement, which is scheduled for July 1991. We will
 24 mail that Final Environmental Impact Statement to all

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1 of those on the original draft distribution list. If
 2 you are not on our mailing list, and you wish to
 3 receive your own copy of the Draft Environmental
 4 Impact Statement, please request a copy by sending a
 5 card or a letter to this address or the one that is on
 6 the hand-out or the comment sheet.

7 And, again, the Final Environmental
 8 Impact Statement will include comments received during
 9 the public comment review period and our responses to
 10 those comments.

11 Now, if appropriate, we will group the
 12 comments in the categories and respond accordingly.
 13 Depending upon the number and the diversity of the
 14 comments, we will either conduct additional analyses,
 15 and we may produce a separate volume of this Draft
 16 Environmental Impact Statement. Or we may just
 17 produce a cover letter and errata sheet.

18 The document will serve as input to the
 19 record decision which will be a formal document of the
 20 decision by the appropriate Air Force decision maker,
 21 and as you just heard from Mr. Aefsky, other studies
 22 in consideration of other issues, besides those
 23 addressed in the Environmental Impact Statement, will
 24 enter into the final decision on this proposal. And,

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1 again, we expect to accomplish the record decision in
 2 late August 1991.

3 Now, a Draft Environmental Impact
 4 Statement was prepared to comply with the National
 5 Environmental Policy Act and the Council on
 6 Environmental Quality of Regulations. Efforts were
 7 made to reduce needless bulk. Write in plain
 8 language; focus on only those issues which are clearly
 9 related to the environment, and we will integrate
 10 those with other documents as part of this decision
 11 making process. Reuse alternatives that were
 12 developed during the scoping process were individually
 13 analyzed.

14 This analysis in the Draft Environmental
 15 Impact Statement focuses on impacts to the natural
 16 environment that may occur either as a direct result
 17 of base disposal and reuse or indirectly through
 18 changes in the community.

19 As I mentioned earlier, this Draft
 20 Environmental Impact Statement focuses on impacts to
 21 the natural environment. The document addresses
 22 socioeconomic factors where there is a relationship
 23 between base disposal and reuse to socioeconomic
 24 conditions that would result in impacts to the natural

1 environment.

2 Our organization has recently produced a
 3 separate socioeconomic study that is not required by
 4 the National Environmental Policy Act. It describes
 5 in greater detail, how the disposal and reuse of
 6 Chanute Air Force Base may economically affect the
 7 surrounding communities. Specifically, the
 8 socioeconomic studies addresses the following factors:
 9 Population, employment, housing, public finance,
 10 education, government, police and fire, medical,
 11 recreation, transportation, and utilities.

12 Copies of the socioeconomic study were
 13 recently provided to key federal, state and local
 14 officials, state's single point of contact and
 15 libraries in the surrounding communities. This
 16 document will also be forwarded to the decision maker
 17 for input into the decision process.

18 Now, I'd like to discuss our results
 19 reported in the Draft Environmental Impact Statement.
 20 In general, the document concluded that there would be
 21 changes to the base surrounding communities which
 22 would cause both positive and negative impacts to the
 23 natural environment.

24 I'll first present an overview of the

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1 proposed action and alternatives, and then, secondly,
 2 I will produce an analysis by resource category.

3 Now, this figure shows land uses for the
 4 proposed action. Again, the focus of the proposed
 5 action is on the use of existing aviation related
 6 facilities to establish a major aircraft maintenance
 7 facility, an educational campus and a hospital life
 8 care facility. Major components of the proposed
 9 action include expansion of the existing air field,
 10 aviation maintenance and support areas and
 11 non-aviation related areas.

12 On this slide the aviation related land
 13 use areas are indicated in blue. Education and
 14 training areas are shown in pink. The green areas
 15 identify recreation areas, and yellow indicates
 16 residential housing.

17 This figure shows the land use for the
 18 minor aircraft maintenance operations alternative.
 19 Now, this alternative is similar to the proposed
 20 action, in that, it combines similar types of aviation
 21 and non-aviation land uses. The difference is the
 22 reduced size of the aircraft maintenance operations,
 23 which now remain within the base property.

24 A second alternative to the proposed

1 action is the non-aviation concept. The focus of the
 2 non-aviation alternative is industrial and education
 3 training land uses and commercial land uses. The
 4 existing air field would be made inactive and the open
 5 areas around the air field would be used for
 6 agricultural purposes.

7 And, finally, the third and final
 8 alternative we analyzed is the no-action alternative,
 9 and this is mandated under the provisions of the
 10 National Environmental Policy Act. In the no-action
 11 alternative, the Air Force would maintain in control
 12 of the base property. After closure, the property
 13 would be maintained in a condition to prevent
 14 deterioration, and we would also establish a caretaker
 15 force to maintain the property.

16 I would now like to shift into the
 17 results of our analysis as depicted in the
 18 Environmental Impact Statement. I'd like to first
 19 make two points. First of all, the proposed action
 20 and the alternatives were analyzed to the same level,
 21 in other words, there was no preference in our
 22 analysis for a proposed action or an alternative.

23 And the second point I'd like to make is
 24 that the baseline in the Environmental Impact

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1 Statement is for Chanute Air Force Base at closure.
 2 In other words, we've already had an Environmental
 3 Impact Statement that has taken the full operation of
 4 Chanute down to the closure conditions, and again,
 5 that was prepared by Air Training Command.

6 This Environmental Impact Statement uses
 7 the closure conditions as a baseline and overlays the
 8 impacts of the disposal and reuse alternatives.

9 Now, redevelopment of the base will be
 10 beneficial to the regional economy. In addition to
 11 the direct jobs on site, a substantial number of
 12 secondary jobs will be created throughout the region.
 13 These additional jobs will increase regional earnings,
 14 income and spending, and the employment would be
 15 phased over the 20 year redevelopment period. This
 16 chart shows a total projected employment for each of
 17 the alternatives by the year 2014, the 20 year build
 18 out.

19 The total employment consists of two
 20 categories. We have direct employment, which is the
 21 bottom chain on this chart, and secondary employment,
 22 which is the top cross edge. For comparison purposes,
 23 the first bar represents employment levels when
 24 Chanute Air Force Base was fully operational in 1988.

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1 As you can see, as you move right on the
 2 chart, the first one is the for the proposed action:
 3 or the second bar, which is more employment than
 4 full-up running Chanute. The third bar or the second
 5 alternative is a minor aviation, and the third is the
 6 non-aviation alternative. If you can't read those
 7 numbers, just briefly the one on the left, which is
 8 the full-up operational Chanute, it is about 10,000.
 9 The proposed action at the full build out is about
 10 12,000 direct and indirect jobs.

11 The total population loss or
 12 out-migration due to the closure of Chanute is
 13 estimated to be as high as 14,000 people. It is
 14 estimated that redevelopment activities will lead to
 15 population in migration to the region. The largest
 16 number of people are expected to locate in Champaign
 17 County.

18 Communities likely to experience the
 19 largest increases in population include Rantoul,
 20 Champaign and Urbana. This chart shows the change of
 21 population from the closure conditions. Total
 22 migration for the reuse alternatives would range from
 23 approximately 12,000, under the proposed action, to
 24 1500, under the non-aviation alternative. And, again,

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1 for all of these proposals this in-migration would
 2 occur over this 20 year build out period.

3 Land use plans for each reuse
 4 alternative are generally compatible with zoning
 5 ordinances of the Village of Rantoul. Two of the
 6 reuse plans retain a runway and adjustment facilities
 7 for aviation related uses. The non-aviation
 8 alternative would retain the runway, but it would
 9 remain inactive.

10 None of the proposed redevelopment
 11 alternatives is expected to have a significant impact
 12 on areas of high or medium visual sensitivity. The
 13 proposed action would have some off base visual
 14 effects due to construction of an aircraft maintenance
 15 facility adjacent to the base's east boundary.

16 All redevelopment alternatives, except
 17 for the proposed action, have low or no visual impacts
 18 because of the limited amounts of infrastructure
 19 activity associated with those alternatives.

20 The runway in accompanying facilities
 21 are incorporated into two of the prospective
 22 redevelopment alternatives. Those aviation related
 23 facilities could become a foundation for major or
 24 minor aircraft maintenance operations.

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1 This chart shows the level of annual air
 2 operations for selected years under the two
 3 redevelopment plans utilized in the air field. The
 4 maximum number of annual air operations would be
 5 approximately 23,000 under the proposed action, and
 6 21,000 under the minor aircraft maintenance aircraft
 7 operations at the full build out in the year 2014.
 8 These operations are not expected to effect air space
 9 and air traffic in the region of influence.

10 Now, this figure shows the projected
 11 noise contours for aircraft noise levels for the
 12 proposed action in the year 1994, when the highest
 13 noise levels are expected. These noise contours
 14 represent areas of equal noise around the air field,
 15 and they are measured in what we would call DNL or the
 16 measurement of a day and night average noise level.

17 A day and night average noise level
 18 takes the noise over a 24 hour period, averages it,
 19 and those are the contours. You could think of those
 20 as noise footprints. There's also a penalty in the
 21 model for night operations.

22 You can see the two areas that will
 23 generate the most noise consist of the runway, and on
 24 the east side or the right side of that chart is an

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1 aircraft run-up pad or run-up area. As you can see,
 2 there are no noise sensitive areas or residents
 3 effected by these projected noise levels. As you
 4 know, Chanute Air Force Base currently conducts no air
 5 operations. So these noise sources will be an
 6 increase to existing noise levels. This is a similar
 7 slide for the minor aircraft maintenance operation
 8 alternative, and this is a smaller noise contour.

9 And then, finally, from those slides
 10 we've calculated land areas that would be exposed to
 11 the 65 DNL or the 65 noise level exposure, and this
 12 chart shows for the proposed action and the minor
 13 aircraft alternative how many acres.

14 We also see on this slide a decrease in
 15 the amount of aviation and amount of acres exposed to
 16 a certain noise level due to national standards
 17 requiring quiet aircrafts by the year 2000. So by the
 18 year 2000, we anticipate that there will be -- as a
 19 matter of fact, there's a statute that requires
 20 commercial aviation to have quieter aircrafts. That's
 21 why the land areas decrease during the build out.

22 The redevelopment of Chanute Air Force
 23 Base will affect local and regional transportation
 24 networks. It will increase traffic on major roads.

30

1 especially U.S. 45 and Maplewood Drive. This figure
 2 shows the estimated number of daily trips generated
 3 under each of the alternatives for the major roadways
 4 assessing Chanute Air Force Base.

5 For comparison purposes, the first bar
 6 represents the amount of traffic when Chanute was
 7 operational, approximately 25,000 trips per day. The
 8 number of daily trips for this proposal would range
 9 from 15,000, on the non-aviation alternative, up to
 10 56,000 for the proposed action, and, again, this is at
 11 the full build out in the year 2014.

12 Redevelopment of Chanute Air Force Base
 13 will also place demands on the local utility systems.
 14 including water, waste water, solid waste and energy.
 15 which includes electricity, natural gas and coal.
 16 This table shows the projected increases in the
 17 utility demands for the reuse alternatives. In
 18 general, the utility demand for the proposed action is
 19 at or near preclosure levels.

20 Now, the Air Force has conducted an
 21 investigation to identify, characterize and remediate
 22 environmental contamination on Chanute Air Force Base
 23 as a result of the past actions. This comprehensive
 24 effort is called the Installation Restoration Program.

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1 and this figure shows the nine locations where
 2 contamination was identified in this investigation.
 3 Clean-up activities will be accomplished in accordance
 4 with applicable federal and state laws and
 5 regulations.

6 Chanute Air Force Base is scheduled to
 7 complete initial remedial actions in 1991, with
 8 monitoring to continue after base closure. Monitoring
 9 of the ground water is usually a long-term requirement
 10 to insure the success of the clean-up.

11 The Air Force will take all necessary
 12 actions for environmental clean-up of the base to
 13 protect public health and the environment. Deeds of
 14 property transfer will contain this assurance and all
 15 property transfers will be held in compliance with the
 16 Comprehensive Environmental Death, Response,
 17 Conversation and Liability Act.

18 An asbestos survey was performed on the
 19 base and the results are in preparation. An Asbestos
 20 Abatement Plan is due to be complete in April of 1991.
 21 Implementation of an effective asbestos management
 22 would preclude any reuse problems associated with
 23 exposure to asbestos. Polychlorinate Biphenal
 24 compounds, called PCB, once used extensively on

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1 electrical equipment, recent legislation has put
 2 stringent regulations on the manufacture, distribution
 3 and use of PCBs.

4 Prior to base closure, the Air Force
 5 will remove from service and properly dispose of all
 6 equipment associated that is not PCB free or not in
 7 compliance with EPA Standards.

8 Also, a radon sampling survey was
 9 performed at Chanute Air Force Base in 1988 as part of
 10 the Radon Assessment and Litigation Program. The base
 11 has implemented a detailed Radon Assessment Program in
 12 accordance with Air Force policy. The results of this
 13 radon survey are due in the fall of 1991.

14 Impacts to geologic resources underlying
 15 Chanute are not expected from any of the reuse
 16 alternatives. An analysis of the water samples from
 17 the base's wells shows no evidence of contamination.
 18 The drinking water for Chanute Air Force Base and the
 19 Village of Rantoul comply with federal and state
 20 drinking water standards.

21 This figure shows that the water demand
 22 is projected to be greatest under the proposed action.
 23 with a daily demand of approximately 3.4 million
 24 gallons per day, and lowest under the no-action

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1 alternative.

2 Major air quality impacts would occur
3 as a result of the reuse alternatives. Air pollutant
4 emissions from aircraft related activities would occur
5 under two of the three alternatives. Air pollutants
6 emitted would be carbon dioxide, nitrogen oxide
7 sulfur dioxide and particulates. Carbon monoxide and
8 nitrogen oxide are considered the most sufficient
9 pollutants emitted during reuse activities.

10 The proposed action would result in
11 carbon monoxide in air pollutant emissions of
12 approximately 4.3 tons per day, and this slide shows
13 for the other alternatives.

14 Air quality impacts during construction
15 would occur due to dust emissions from ground
16 disturbing activities. These impacts would be
17 temporary. I would like to reiterate, under air
18 quality, that our analysis did not indicate violation
19 of any Indiana or National Air Quality Standards.

20 Now, wetlands are considered a unique
21 biological resource. They are described in areas
22 where saturation with water is a dominate factor
23 determining the types of plants and animals living in
24 the area. A total of about 12 acres of wetlands occur

1 on Chanute Air Force Base. These sites are
2 contributory to upper Salt Fork creek and prehistoric
3 adjacent to the creek. Implementation of reuse
4 alternatives are expected to have a minor to no impact
5 on wetland areas.

6 And, finally, for cultural resources
7 the highlighted portion of this map identifies an area
8 where additional study is being conducted to determine
9 whether there are any properties eligible for listing
10 on the National Register of Historic Places.

11 There is no impact projected for
12 archeological or native American resources due to the
13 lack of significant findings during our study. Now,
14 that concludes my presentation on the reuse proposal
15 and the environmental effects.

16 HEARING OFFICER: Let me make sure, just in
17 case I misunderstood something that you said there at
18 the very end, when you are talking about no violation
19 of air quality standards, you're talking about
20 Illinois Air Quality Standards?

21 LIEUTENANT COLONEL BARTOL: Or National Air
22 Quality Standards.

23 HEARING OFFICER: I wasn't sure if you
24 misunderstood the state you were in.

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1 LIEUTENANT COLONEL BARTOL: I went to school
2 at Purdue in Indiana.

3 HEARING OFFICER: I probably shouldn't say it
4 but I went to IL and that's even worse here in
5 Illinois. But I bought an Illini cup for my old boss.
6 He's an Illinois native. So I've got you all at
7 heart.

8 At this point, let me just go quickly
9 over a few of the procedures we'll be doing in just a
10 moment for the people that arrived late. You were
11 asked, when you came in, to fill out an attendance
12 card and if you cared to, a comment sheet. If you
13 have not filled out one, especially the card, I'd ask
14 you to do so at the break, particularly if you wish to
15 make a public statement.

16 Regarding the making of the statement
17 tonight, elected public officials or representatives
18 will be called upon first for their statements. For
19 those others who indicate a desire to make a
20 statement, I'll shuffle your cards up, and we'll do it
21 randomly to make sure that everyone has a fair
22 opportunity to be heard. And all statements must be
23 limited to five minute so that all the interested
24 parties have an opportunity to speak.

1 Now, if you don't wish to make a public
2 statement or we run out of time before you've had an
3 opportunity to speak or if you have additional
4 comments beyond those which you'd like to make within
5 your five-minute slotted time, you may turn in your
6 written comments after this meeting or send them, as
7 indicated at the bottom of the sheet, as long as
8 they're received by the 22nd of April. I'll answer a
9 question, and then we'll take a break.

10 MR. FRANK ELLIOTT: A point of order really,
11 we have some 22 organizations within the Village of
12 Rantoul and we've boiled it down into two statements.
13 So instead of 22 people taking five minutes each, I
14 respectfully request that two people be permitted a
15 little more than five minutes, not an hour, but
16 something less to make a statement for the Village of
17 Rantoul. If not, we can make two hours of speeches.

18 HEARING OFFICER: Well, how much time are you
19 requesting?

20 MR. FRANK ELLIOTT: I don't know, about ten
21 minutes each, but we can boil it down to five minutes
22 for 22 people, or maybe ten, 12 minutes for each of
23 two people.

24 HEARING OFFICER: Well, I understand, and I

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1 have some sympathy with what you have to say there.
 2 but I'm also concerned as to whether we have other
 3 governmental bodies or representatives here that also
 4 wish to speak. So that's part of the concern, and
 5 that's part of why, in looking at it, we're talking
 6 about trying to make sure that there's some fair --

7 MR. FRANK ELLIOTT: My point is we're talking
 8 about the Village of Rantoul and that is the community
 9 where we live, that's where Chanute is located.

10 HEARING OFFICER: I understand what you're
 11 saying there. Let me ask, as far as public officials
 12 here, can I get a show of hands of elected public
 13 officials who are requesting to make a statement,
 14 either elected public officials or their
 15 representatives. We're talking about four.

16 I'll tell you what I do, the number of
 17 people that we've got here is less than expected.
 18 I've heard a request for ten minutes for at least two
 19 people?

20 MR. FRANK ELLIOTT: For at least two people.
 21 HEARING OFFICER: My problem becomes, if I
 22 grant Rantoul the opportunity to have ten minutes, I'm
 23 hard pressed if there's someone from other public
 24 agencies, since they represent a large number of

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1 ahead and do that and check the block and take it back
 2 to the back table, they'll make sure that I get that.

3 At this time, I would like to call on
 4 Mr. Dan Dees, whose representing the State of
 5 Illinois, to make a statement and comment at this
 6 time.

7 MR. DAN DEES: Colonel, my name is Dan Dees.
 8 My address is 2300 South Dirksen Parkway, Springfield,
 9 Illinois, 62764. I'm here representing the State of
 10 Illinois and the Illinois Department of
 11 Transportation. My position is Deputy Director of the
 12 Office of Planning and Programming of the Illinois
 13 Department of Transportation.

14 Additional statements from Governor Jim
 15 Edgar and Kirk Blown, Secretary of the Illinois
 16 Department of Transportation, will be forwarded to the
 17 Air Force for the record; included in those documents
 18 will be technical comments from the Federal Aviation
 19 Administration and the Illinois Department of
 20 Transportation, as well as recommendations for land
 21 transfers from aviation and public Air Force uses.

22 Over the past year the Illinois
 23 Department of Transportation has been directly
 24 involved in the potential reuse of Chanute Air Force

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1 people also, not to grant them the same.

2 So what I will do, because the number
 3 that we've got, only being four people, I'll extend it
 4 to a maximum of ten minutes. What I'd ask is for the
 5 public officials, if you don't have a need to use all
 6 ten minutes, for the benefit of all of the other
 7 people attending, I'd ask you not to.

8 But, certainly, if you need to use the
 9 ten minutes, I'll go ahead and do it on the basis that
 10 you're acting as the elected representatives of a
 11 large number of people, and I think that that's
 12 probably as fair a way as I can try to do it at this
 13 point.

14 So we'll start out -- I have four people
 15 at this point, and I will call on them and then anyone
 16 else that wishes to make a public statement, their
 17 allotted time will be five minutes. We'll recess now
 18 and come back at five minutes past 8:00, and I'm going
 19 to use the clock on the far wall.

20 (Whereupon, a short recess was had,
 21 after which the proceedings
 22 continued as follows:)

23 HEARING OFFICER: If anyone has not filled
 24 out a card and wants to make a statement, if you'd go

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1 base. We have worked hand-in-hand with Village
 2 officials to promote Rantoul and the Chanute
 3 facilities to numerous aviation firms across the
 4 Nation.

5 We have conducted archeological surveys
 6 for off-base areas included in the proposed action.
 7 We have provided biological and wetland information
 8 for all areas included in the proposed action, both on
 9 and off base, and we have provided coordination with
 10 other state agencies, as appropriate.

11 The Department and the Village have
 12 developed the proposed action of reusing the aviation
 13 related facilities for a major aircraft maintenance
 14 operation. Components of this proposed reuse are
 15 shown on the airport layout plan, or ALP, on display
 16 to my left. A formal submittal of the complete
 17 airport layout plan will be made soon after review by
 18 the Federal Aviation Administration is complete.

19 The red line on the ALP display outlines
 20 the properties that the Department believes must be
 21 included in the airport jurisdiction if a major
 22 aircraft aviation center develops. This land should
 23 be transferred to an airport authority as a public use
 24 benefit.

1 All of these improvements and facilities
 2 are necessary to make Chanute capable of housing
 3 various house maintenance operations for either the
 4 primary firm or numerous small firms providing
 5 specialized services to the aviation industry.

6 The Department is including the existing
 7 fire training facilities in the airport layout plan.
 8 Over the past six months several parties have
 9 indicated their interest in the continued operation of
 10 these facilities.

11 In a separate submittal, we will provide
 12 letters from the American Association of Airport
 13 Executives, the Federal Aviation Administration, and
 14 the University of Illinois Fire Institute, all stating
 15 their support and interest in the continued use of
 16 these facilities, most specifically, the existing fire
 17 pit.

18 In reviewing the Draft EIS, the
 19 Department is concerned about the proposed IRP,
 20 Installation Restoration Program, environmental
 21 clean-up actions, that might effect the fire pit
 22 facilities. In the best interest of the redevelopment
 23 of Chanute, it is the Department's request to the Air
 24 Force that prior to implementing any IRS actions in

1 the fire training area, detailed discussions take
 2 place with the Department to facilitate continued use.
 3 Primary uses of this facility will be
 4 fire training for aviation, chemical and petroleum
 5 uses, since all are important to the safety of our
 6 citizens.

7 In closing, I want to thank you for the
 8 opportunity to speak. We believe that the Draft EIS
 9 or the Aviation Reuse of Chanute Air Force Base has
 10 been well-prepared and, with few exemptions, reflects
 11 the impact assessment of the base closure and
 12 potential reuses, thank you.

13 HEARING OFFICER: Thank you, Mr. Dees. At
 14 this time I would call on Mayor Podagrosi for her
 15 comments.

16 MAYOR PODAGROSI: Colonel Heupel, I am Katie
 17 Podagrosi, Mayor of Rantoul, 333 South Tanner Street,
 18 Rantoul. We of the Village have thoroughly read the
 19 Draft Environmental Impact Statement, and we are
 20 entering into the record nine papers on specific
 21 concerns.

22 We are also in receipt of the recently
 23 completed Socioeconomic Impact Analysis, and since the
 24 impact analysis of the EIS depends substantially on

1 that supporting document, our positions are based on
 2 both the EIS and the socioeconomic reports.

3 In general, we are disappointed that a
 4 number of issues of greatest concern to many citizens
 5 in Rantoul remain unaddressed. The documents rely
 6 heavily on the best case scenario of the acquisition
 7 of a major user, such as United Airlines, and skims
 8 over the short term, 1992 to 1996, ten years with no
 9 or minimal reuse.

10 Most of all, we believe these documents
 11 are overly ambitious relative to expected growth. We
 12 remind you that after two years of concerted effort on
 13 the part of many people, no company has committed to
 14 date to settle at Rantoul.

15 The impact on the infrastructure of the
 16 base and local community under minimal use conditions
 17 is hardly addressed. We ask that the document be
 18 amended to include an additional column on Page S-3,
 19 Table S-1, to reflect conditions under the no-action
 20 alternative with a baseline of December 29, 1988,
 21 through the year 1998.

22 One document that I'm entering into the
 23 record this evening is the Chanute Technical Training
 24 Center Economic Resource Impact Statement of 1988

1 published by the Air Force during the year of the
 2 closure announcement.

3 This document indicates that the
 4 economic impact of the operation of Chanute on this
 5 area is almost \$136 million annually. This \$136
 6 million is only Chanute expenditures. The accepted
 7 income multiplier reflects a total economic impact of
 8 \$341 million cash flow dollars on the Village of
 9 Rantoul and surrounding area.

10 The impact of the jobs is listed at
 11 14,203. Of the 991 civil service jobs at Chanute,
 12 493, or about half, live in Rantoul. Of the 6,000
 13 military at that time, over 4500, or 75 percent, live
 14 at Rantoul. Even if we've dropped down to only 50
 15 percent impact on the Rantoul community, the Air Force
 16 indicated in that report that we're losing \$68 million
 17 directly from our economy.

18 Using the same multiplier as above, the
 19 impact on the Rantoul community is \$170 million a
 20 year. Now, these are figures put out by the Air Force
 21 but concocted by Rantoul.

22 The Chanute Economic Impact Statement
 23 was clearly written to impress upon the civilian world
 24 the importance of the military installation to the

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1 local economy. Certain formula were used to reach
2 conclusions in this document.

3 We are requesting that the Air Force use
4 the same formula to express the economic loss to the
5 community of losing the base; electing to adopt the
6 baseline of the date of closure to develop the Draft
7 Environmental Impact Statement. Clearly the Air Force
8 can make a case that there will be very little, if
9 any, negative impact on the local community. Just as
10 clearly, this is a case of using facts and statistics
11 to develop a preferred analysis.

12 The Village of Rantoul protests this
13 methodology, since neither the closure nor the reuse
14 reports address adequately the short term
15 environmental and socioeconomic no or minimal impact
16 conditions.

17 There's no doubt that the unemployment
18 rate in Rantoul will take a definite nose dive with
19 the closure of Chanute in September of '93. There
20 should also be no doubt that the Village government
21 and others here are diligently striving to insure that
22 unemployment does not reach rock bottom, and that
23 whatever rate is reached, will only be for a minimum
24 time.

1 doing everything possible to extend the life of the
2 current facility.

3 Currently, additional restrictions are
4 being drafted, which, among other things, will limit
5 the increase the haulers may experience in any given
6 month and require additional trash segregation and
7 reclamation efforts.

8 The bottom line is the Rantoul Landfill
9 will not be able to receive an increase of solid
10 waste generated by crating, packing and disposal of
11 materials being accessed by the transfer of Chanute
12 activities to other bases.

13 These documents continue to skirt the
14 issues of problems associated with waste water
15 treatment plant in the event of no or minimal reuse.
16 We remind the Air Force that Rantoul did not need the
17 additional capacity in its plant for the local
18 community. The additional capacity was built to
19 accommodate Chanute. We respectfully refer to the
20 contract between the Village of Rantoul and Chanute
21 Air Force Base in which the Air Force agrees to pay
22 the minimum charge for flow into the plant.

23 The Draft EIS does not indicate the Air
24 Force will demolish and clean-up certain buildings

1 We take exceptions to comments on Page
2 2-1, Section 2-1, Paragraph 3, of the Socioeconomic
3 Impact Analysis, which lists several of
4 Champaign-Urbana's larger employers as Rantoul. We
5 should be so fortunate as to have Carle Hospital,
6 Kraft, J. M. Jones and Coldwell Systems, along with
7 the industrial employers we do have. Inclusion of
8 these companies in this report inflates the employment
9 statistics for Rantoul to the point to be misleading.

10 Assumptions are made that Rantoul's
11 Landfill will be available for base closure debris.
12 We're requesting that the name of the Rantoul landfill
13 be deleted from the land fills available to receive
14 closure material.

15 Disposal of solid waste generated by
16 base closure activities between now and October of '93
17 is of concern. Due to the fill rate at the Rantoul
18 Landfill experienced during the last few years and the
19 rapidly approaching closure date for this facility,
20 restrictions have been imposed on the types of solid
21 waste material received. Material from demolished
22 buildings, for instance, is no longer accepted from
23 any source. It appears that the EPA restrictions will
24 preclude any expansion of the landfill. So we're

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1 which must be removed prior to closure and reuse.
2 These include at least the following: All structures
3 associated with the old waste water treatment plant.
4 Buildings 732, 125 and 107, and I have an attachment
5 on that.

6 We cite for the record the following
7 reports prepared by consultants hired by the Village
8 of Rantoul, approved by associated Chanute reuse
9 committees, as well as by the Rantoul Plant Commission
10 and the Rantoul Village Board of Trustees. These are
11 the Urban Land Institute Report, the Etie Report, the
12 Murphy Till Report for Aviation, and the Economic
13 Research Associates Museum Study (sic).

14 In addition to my comments this evening
15 and comments by Mike Little, consulting engineer for
16 Sodemann & Associates representing the Village of
17 Rantoul, we are attaching, for the record, papers
18 prepared at the Village's request from the following,
19 the Rantoul Village Board of Trustees, "A Resolution
20 of Intent Regarding Chanute Reuse"; Kent Tucker,
21 Community Development Director, who will call special
22 attention to specific concerns on the socioeconomic
23 issues; Chief Alan Jones addressing further concerns
24 relative to security during the short term reuse.

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period. Ken Huddleston phonetic transcription has prepared a paper to address our concerns in the impact the closure will have on village finances. This is in issue number one discussed in both the EIS report and the community reuse report. Rich Thomas's addendum addresses issues. Dan Caputo phonetic addresses the issues of training and short term inst. of firefighting. Eric Baetz phonetic basically addressed some alternative uses being considered by members of three reuse committees.

These issues have neither been considered nor approved or disapproved by the Village Board since it's early in the planning process, but we ask that these be studied as alternative uses to preclude the use for an additional EIS at a later date.

The Village definitely concurs with the attachment from Steve Combest (phonetic) of CNS Demitar relative to a site for a transfer station. These individuals worked closely with the Village of Rantoul Government, and we concur with their concerns.

In conclusion, I refer to the report on Disposal and Reuse of Chapman Courts (phonetic) and request that the Rantoul Landfill be deleted from the

list of available landfill mentioned therein. I would further like to express appreciation to the Air Force for the expeditious study of the Chapman court situation and to further thank Major General Day, for his cooperation in attempting to bring this problem to a satisfactory conclusion for the base and the community.

General Day's action is indicative of those that we ask the Air Force to continue taking to help alleviate hardship on the local community. Specifically, we are asking that the Air Force delineate for us exactly what the caretaker status will involve. We ask for minimal hassle over those items that should be, and historically have been, conveyed under terms of public benefit, and we ask that reasonable prices be expected for those properties and facilities presented for sale under private use provisions. thank you.

HEARING OFFICER: Thank you, Mayor Podagratis, and at this time I'd also like to thank you, Mayor, for making the Civic Center available for us to be able to use tonight so that we could accommodate as many people as we have here tonight. thank you very much. Very well, at this time I would call on Mr.

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Mike Little for his comments.

MR. MICHAEL LITTLE: Colonel, my name is Michael Little, and I'm here tonight representing the Village of Rantoul as Village Engineer and as Chairman of the Public Works Reuse Committee. I'm submitting written copies of questions and comments relating to the Draft Reuse EIS and the Socioeconomic Impact Analysis Study, which are far too extensive to read at this time. However, I would like to summarize the major areas of concern to the Village.

My first comments concern the Draft EIS. Modifications to various components of the regional waste water treatment plant and on-base collection system must be made under all alternatives. These modifications are detailed in a study entitled "Analysis of Impacts on Waste Water Systems Due To Closure of Chanute Air Force Base," a copy of which is attached to my written comments.

In Appendix G, Air Force Policy Management of Asbestos and Closing Bases, I have a question. Does policy number six apply to the very stream lines? If so, when will these lines be removed?

Policy number seven states the course of action to be followed with respect to asbestos at the

closing installation quote, "will be analyzed in the Disposal and Reuse Environmental Impact Statement," end quote. The only thing this EIS says about asbestos is that, quote, "An Asbestos Abatement Plan is due in April of 1991," end quote. Is that insightful analysis adequate to fulfill the requirements of this clause?

It would seem logical that the issue of asbestos in buildings proposed for reuse would have a major impact on the real value of those buildings. Also, in the case of abandoned buried steam lines, buried asbestos left behind and not properly disposed off leaves a potential liability problem for the future occupants of the property.

The Village believes this EIS should reflect the ramifications of what is and isn't removed under the Asbestos Abatement Plan. We would also like to have a copy of the Asbestos Abatement Plan when it becomes available.

The Village's position concerning underground storage tanks is that all USTs should be removed prior to closing. Increasing complex compliance standards will make any remaining tanks a liability to any future potential owners. If the Air

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1 Force desires to maintain a marketability of its
 2 properties, these tanks should be removed now or
 3 replaced with new systems that can meet all future
 4 regulations.

5 Concerning the IRP Program, a remedial
 6 investigation and a summary report is due to be
 7 completed in the spring of 1991. Is that report
 8 complete? The Village hereby requests a copy when it
 9 becomes available. A radon survey is scheduled for
 10 1991. We're curious about the status of that survey.
 11 and the Village requests a copy when that is
 12 available.

13 Concerning the overall question of the
 14 disposition of the base infrastructure, the Board of
 15 Trustees of the Village of Rantoul has formally
 16 adopted the following position statement: "The
 17 Village of Rantoul Position Statement Chanute Reuse
 18 Infrastructure Transfer and Responsibility" and "The
 19 General Position Regarding Utility and Streets."

20 The Village of Rantoul is willing to
 21 accept responsibility for the appropriate public
 22 portions of the streets, water, sanitary sewer, storm
 23 sewer and electric systems; provided, one, the Air
 24 Force conveys to the Village the necessary components.

1 including requested equipment, together with all
 2 necessary easements and/or rights of way deemed
 3 appropriate by the Village.

4 Two, the Air Force will cooperate with
 5 the Village in the public benefit transfers that the
 6 Village deems appropriate for the overall good of the
 7 community; and, as recommended, under the CII and CMT
 8 studies; and, three, the Air Force will participate in
 9 support of the systems as detailed in the following
 10 descriptions. Concerning the water, storm sewer,
 11 sanitary sewer and electric systems, the Air Force
 12 agrees to support the operation of each of these
 13 systems by paying a user fee for five years following
 14 the date of closure for as long as necessary to insure
 15 the marketability of the Air Force properties. This
 16 fee will be based upon the Village's estimated annual
 17 operating cost for the on-base system with the credit
 18 based upon the level of reuse that occurs.

19 In the case of the waste water system,
 20 usually the fee will be determined in accordance with
 21 the conditions of the contract between the Village and
 22 the Air Force. If the Air Force chooses to sell the
 23 water, sanitary or storm systems to a third party, the
 24 Village will consider that organization a franchisee.

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1 of the Village. No water or sewer treatment centers
 2 not owned by the Village will be allowed to operate
 3 within the Village limits. The Village assumes that
 4 they will become the owner and operator of the public
 5 portions of the electric system.

6 Concerning the Rantoul Municipal
 7 Landfill, the Village of Rantoul's post-closure plan,
 8 under the Village's Illinois EPA permit to operate the
 9 Rantoul Municipal Landfill, stipulates that the
 10 landfill will close April 1st, 1995. This plan
 11 assumes no material increase in the amount or quantity
 12 of solid waste delivered to said landfill between the
 13 present time and said date.

14 The present Board of Trustees of the
 15 Village of Rantoul will adopt appropriate legislation
 16 consistent with such an EPA permit to restrict the
 17 quantity or amount of solid waste delivered to the
 18 Rantoul landfill.

19 Concerning the steam system, the Village
 20 is not prepared to accept responsibility for any
 21 portion of the steam plant or the steam distribution
 22 system. The Air Force should provide a caretaker
 23 operation, as suggested in the Draft EIS, for the
 24 complete system for five years following the date of

1 closure for as long as necessary to insure the
 2 marketability of the Air Force's buildings, to allow
 3 time for the conversion of all buildings to individual
 4 HDAC systems. The Air Force shall remain responsible
 5 for the steam plant and distribution system and shall
 6 properly dispose of the facilities when they're no
 7 longer needed.

8 Fire protection and security: Prior to
 9 accepting responsibility for these operations, the
 10 Village will expect the Air Force to agree to a
 11 document in support of the utilities system.

12 Other considerations, the Village is
 13 requesting Buildings 55, 56 and 62, including all
 14 records, drawings, reports, et cetera, pertinent to
 15 the long-term operation and management of the base
 16 facilities. The Village is also requesting building
 17 43, the fire station, and all associated equipment.
 18 That concludes the comments on the policy statement on
 19 utilities.

20 Back to my comments. Concerning
 21 demolition of existing buildings, the EIS should be
 22 revised to reflect the requests that have been made by
 23 the Village for specific buildings that are
 24 undesirable and pose environmental hazards; in

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1 addition, the interference of the abandoned structures
 2 at the old main sewage treatment plant with the
 3 east/west runway clear zones should be addressed.

4 My final remarks concern both the Draft
 5 EIS and the Socioeconomic Impact Study. The EIS and
 6 Socioeconomic Analysis should present the preclosure
 7 conditions as a third level of comparison to the
 8 baseline and reuse alternatives. Without this level
 9 of comparison, these reports provide a decidedly
 10 distorted view to the real impact of the community.

11 For example, in section four,
 12 Environmental Impacts of the Socioeconomic Analysis,
 13 comparison are presented concerning jobs created by
 14 the proposed alternatives. For proposed action, a
 15 reference is made to preclosure employment levels
 16 stating that the anticipated employment figures
 17 represent a 2 percent increase over preclosure levels
 18 associated with Chanute.

19 In the discussion of the other three
 20 alternatives, no mention is made of the 72 percent, 88
 21 percent and 99.4 percent decreases in employment
 22 levels as compared to preclosure Chanute related jobs.

23 The methodology used to estimate
 24 staffing levels is another example. Using ratios

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1 based upon population may work fine in areas of
 2 hundreds of thousands or millions of people, but it
 3 doesn't work here. The report states that, for the
 4 non aviation alternative, quote "Current public
 5 service levels could be maintained, end quote, with 51
 6 or half the current number of Village employees.

7 Just because half the people move from a
 8 neighborhood, doesn't mean that you can close half the
 9 streets or abandon half the water pipes. Manning
 10 water and waste water treatment plants takes very
 11 nearly the same staff size irregardless of the flow in
 12 or flow out. The Village is more than willing to work
 13 with the Air Force's contractor to see to it that
 14 accurate cross data appears in this report.

15 Finally, the Village of Rantoul must
 16 rely on the information you present when it tries to
 17 convince federal and state agencies of the need for
 18 assistance. As these documents stand, they portray a
 19 closed portion scenario of little or no real economic
 20 impact on the Village.

21 The Socioeconomic Analysis is
 22 particularly blind and slighted to minimize or even
 23 ignore the hard realities that face the Village of
 24 Rantoul. For example, the Socioeconomic Report

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1 Summary Section, which is about as far as most
 2 bureaucrats bother to read doesn't even mention the
 3 no-action alternatives and its devastating effects on
 4 the community.

5 In nearly every section, on nearly every
 6 page, the information presented and the language used
 7 downplay the negatives and highlight the positives.
 8 The Air Force has already decided to abandon Chanute.
 9 What difference does it make now if you present the
 10 truth about the impacts of that decision? Thank you.

11 HEARING OFFICER: Thank you, Mr. Little. I
 12 have Mr. Jack Miller. I ask him to come forward at
 13 this time for his comments.

14 MR. MILLER: Colonel, I'm Jack Miller, 1804
 15 Gleeson, Rantoul, Illinois, 61866. I am also the
 16 Chairman of the Health Services Committee assisting in
 17 the Village of Rantoul reuse efforts. And, sir, I was
 18 pleased to see that your team found the extra 90,000
 19 square feet in the Chanute Hospital that the 1988 Base
 20 Closure Committee had lost.

21 I am here representing the Military
 22 Retiring Community, including dependents. There are
 23 around 5,000 such individuals currently taken care of
 24 in the superb manner by the Chanute Hospital.

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1 Unfortunately, many of these people have illness which
 2 require costly medication, and their health precludes
 3 frequent trips to Scott Air Force Base or Wright
 4 Patterson Air Force Base Hospitals.

5 You have noted in the Socioeconomic
 6 Analysis the limitations Veteran's Administration
 7 Hospitals have, which means that many people do not
 8 have access to the Danville VA Hospital.

9 We are well aware also of the Champer's
 10 Program. Many of those currently being taken care of
 11 at Chanute are Medicare eligible. In any case,
 12 whether Champer's or Medicare, they are not
 13 financially able to afford secondary coverage.

14 I notice services are not required to
 15 take military hospitals to the patient, but, once
 16 again, we ask that some consideration be given to
 17 those in ill health, who specifically moved to this
 18 area so they could afford to remain in as good health
 19 as possible for as long as possible. Outpatient and
 20 pharmaceutical services would go a long way in filling
 21 this void, thank you.

22 HEARING OFFICER: Thank you, Mr. Miller.
 23 Now, I don't have any other cards. Let me ask, do we
 24 have any other cards in the back? Is there anybody

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1 that's wishing to make a statement that has not filled
2 out a card?

3 MAYOR PODAGROSI: May I make one more
4 comment?

5 HEARING OFFICER: I was going to come back to
6 you and say if we don't have anybody else that wants
7 to make a comment, if you'd like some more additional
8 time, I'll give you some additional time. So if you
9 don't mind holding for just a minute, Ma'am. If you'd
10 indicate your name, Sir.

S 11 MR. GALE CONNELLY: My name is Gale Connely.
12 I'm Superintendent of Rantoul Township High School
13 District 193. I have just a word of caution in
14 regards to the Socioeconomic Impact Analysis. We
15 received this analysis a few days ago. A major error
16 was included in the data. You can pick nearly any
17 page.

18 For example, on Page 4-20, it's showing
19 the fiscal projections from 1991 to 2014, and it
20 shows, throughout those years, that our high school
21 district would have a surplus of \$500,000 each year.
22 However, the reality is closer to that we would have a
23 deficit within 3 to \$500,000 each year, based on their
scenario.

1 And the error was simple because the
2 error was created because they did not properly
3 research our State Aid Farms from the State of
4 Illinois. As the local assessment would improve in
5 Rantoul, we will lose substantial state funding.

6 They've made a commitment to people to
7 produce this and made a commitment to review it, but I
8 thought it should be on the record that that error was
9 made. Since that error could have been prevented by a
10 phone call, either to one of the local school
11 districts or to the state, it's not at all clear to me
12 why such an enormous error was made and put in a
13 published document; even though it doesn't say that
14 it's a draft document, it's, theoretically, a draft
15 document. So I would urge you to use your authority
16 to encourage these people to, in fact, use the phone,
17 if nothing else, to collect data before they publish
it.

19 HEARING OFFICER: Let me ask you, sir, do you
20 have any phone numbers you'd suggest?

21 MR. DALE CONNELLY: I gave them my card, and
22 we're in the phone book.

23 HEARING OFFICER: Super, that takes care of
24 that. Mayor Podagrosi, if you have further comments.

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1 I'll entertain those at this time.

2 MAYOR PODAGROSI: I just wanted to mention
3 that when Jack Miller came up and talked about the
4 health care his presence didn't really reveal to you
5 the seriousness of the situation. Jack is one of
6 several Battalion Death March survivors who live in the
7 Rantoul community. They were prisoners of war for
8 four, five, six seven years back in World War II.

9 Congress and everybody else right now is
10 very concerned about health care and other benefits
11 that were promised to the military people who are just
12 now returning to the Persian Gulf. I would just like
13 everyone to remember that at one time these people
14 were very important to America. Today, they seem to
15 be throw-aways, and that's too bad.

16 HEARING OFFICER: Mr. Dees or Mr. Little, did
17 you have anything further? I'll give one last
18 opportunity, is there anyone else wishing to make a
19 public oral comment at this point, for the record?
20 Apparently not.

21 Let me just remind you then, I know
22 we've got into this several times before, but if you
23 wish to submit any written comments, you may do so
24 either using one of these sheets or taking the comment

1 you've got in typed form and sending it to the address
2 at the bottom of this sheet. Those comments will
3 receive the same consideration. They will all be part
4 of the total record, both the summations that we've
5 heard orally tonight and any later written submissions
6 that are received by the 22nd of April, as well as the
7 transcript of the proceedings, will all be put into a
8 document that will be forwarded up through the
9 appropriate chains for the ultimate decision.

10 Mayor, once again, I want to publicly
11 thank you for your providing these facilities for us
12 to use. The officials of the Air Force appreciate all
13 of your efforts in coming out tonight and contributing
14 your views to this public hearing. We thank you for
15 your courteous attention. Please be assured that the
16 Air Force decision makers will carefully consider each
17 viewpoint raised here tonight when deciding the
18 ultimate course of action on the proposal. This
19 hearing is adjourned at 8:43 p.m.

1 COUNTY OF CHAMPAIGN 1
 2 STATE OF ILLINOIS 1
 3
 4 I, Simone Baird, state that I was
 present at the aforementioned hearing and that this is
 a typewritten transcript of the proceedings held on
 held on Wednesday, March 27, 1991, at the Rantoul
 Civic Center, Rantoul, Illinois, commencing at 7:00
 o'clock p.m.
 5
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Illinois Department of Transportation
 Office of the Secretary
 2300 South Dirksen Parkway/Springfield, Illinois 62764
 Telephone 217/782-5597

March 27, 1991

Lt. Colonel Thomas Bartol
 Director of Environmental Programs
 AFRC E BMS/DEP
 Norton Air Force Base, CA 92409-6448

Dear Colonel Bartol:

As Secretary of the Illinois Department of Transportation, a cooperating agency in the preparation of the environmental impact study for the closure of the Chanute Air Force Base in Rantoul, Illinois, I offer the following comments and attachments as a matter of record. My staff will have additional comments as representatives of the Illinois Department of Transportation also. The Illinois Department of Transportation has also been designated by the Federal Aviation Administration as a "Block Grant State." This designation entitles us to represent the Federal Aviation Administration in matters such as airport grants and construction approvals, environmental issues and reviews, and matters of aeronautical engineering, as well as other related aviation issues in this state.

The Federal Aviation Administration has reviewed the March 1991 draft environmental impact statement and comments will be presented by the IDOT Division of Aeronautics by separate letter.

As former Governor James R. Thompson pointed out in his testimony September 12, 1990, the state of Illinois is committed to the development of a National Aviation Center at the Chanute site in Rantoul, Illinois.

S. This redevelopment is no small task and requires an enormous amount of technical expertise and financial assistance. Without the assistance of the federal government in every way possible, I fear the "no action alternative" could become a reality.

S. I, therefore, ask that the Department of Defense coordinate the base closure effort and offer technical and financial assistance to the village of Rantoul.

Lt. Colonel Thomas Bartol
 Page Two
 March 27, 1991

The Federal Aviation Administration has advised the Illinois Department of Transportation "the proposed new airport for Rantoul (No. 3-17-0136) as contained in the current National Plan of Integrated Airport Systems (NPIAS) has been designated as a general aviation reliever for O'Hare International Airport." (December 11, 1990 letter attached to this statement). While this designation is of significant importance, this action by the FAA is directly related to implementation of the proposed action.

8 I ask the Department of Defense to cooperate in providing technical assistance to the public authority for the design, reconstruction, and reactivation of the airport at Chanute.

1 A great deal of engineering and investigative work must be performed prior to design of the airfield. Further, we would expect that the airfield and all properties within the boundaries of the airport layout plan (draft previously submitted), which will be submitted to you as a part of this record, be transferred at no cost to the appropriate public authority.

3.8 It should also be noted that James B. Busey, Administrator of the Federal Aviation Administration, has stated in his February 11, 1991 letter (attached) to former Secretary of Transportation Michael P. Lane that "special emphasis should be placed on the conversion of appropriate former military air bases to civil use and on the identification and improvement of additional joint-use facilities." Mr. Busey's letter is in support of the proposed action. He further cites a particular interest in Chanute potential as a center for fire/crash/rescue training. He states, "Chanute could become an important national civil aviation asset in this regard."

I urge the Department of Defense to consider the following actions:

- 2.0 Transfer, at no or minimal cost, the existing fire/crash/rescue training facilities and a reasonable amount of equipment to the appropriate public authority.
- 3.6 8.0 Cooperate with the appropriate authority in the development of an FAA approved fire/crash/rescue training program that could be considered for use by the military where applicable.

Lt. Colonel Thomas Bartol
 Page Three
 March 27, 1991

I believe that the proposed actions present the highest and best re-use of the Chanute Air Force Base. These actions apparently present a minimal effect on the environment as well, thereby intensifying the attractiveness of the re-use proposal.

The state of Illinois has undertaken an aggressive role in assisting this region of our state in encouraging major air carriers and aviation related companies to develop at the Chanute site. It should be noted that Illinois/Chanute remains a candidate for United Airlines Maintenance Operation Center while 45 other sites have been eliminated in this fierce competition.

The concept of the development of a National Aviation Center, an industrial airport specializing in aircraft maintenance and related technologies is on the leading edge of the future of aviation. Complementing the air field by providing much needed aviation education and training make this concept one of the most important in the aviation transportation industry today.

I urge the maximum of consideration on behalf of the village of Rantoul and the redevelopment committee for the conversion of the Chanute Air Force Base. I thank you for the opportunity to comment and participate in the environmental impact effort.

Sincerely,

Kirk Brown
 Secretary

Attachments
 cc: Mayor Katy Podagrosi
 Mr. Gary Vest

DOCUMENT 2

U.S. Department
of Transportation

Federal Aviation

Administration

Great Lakes Region
Detroit, Michigan
Montgomery, Ontario
Ottawa, Quebec
Winnipeg

2300 East Devon Avenue
Oak Park, Illinois 60618

APT ENGINEERING

December 11, 1990

DEC 13 1990

Mr. Roger M. Barcus, Chief Engineer
Illinois Department of Transportation
Division of Aeronautics
Capital Airport
Springfield, Illinois 62706

Dear Mr. Barcus:

Rantoul Airport
Rantoul, Illinois
NPIAS Revision

By this letter, the Federal Aviation Administration would like to inform you that the proposed new airport for Rantoul (No. 3-17-0136) as contained in the current National Plan of Integrated Airport Systems (NPIAS) has been designated as a general aviation reliever for O'Hare International Airport. This action was taken by our Agency in anticipation of the designation by United Airlines of Rantoul as its maintenance hub, thereby relieving O'Hare of aircraft requiring maintenance and associated flights.

These changes to the NPIAS are effective as of this date.

We will continue to support the development of aviation at Rantoul to meet the needs of aviation.

We thank you for your continued cooperation with our office on this project.

Sincerely,

Jerry R. Monk
Community Planner
Chicago Airports District Office

LVB	MCP	LTF
CPL	ERB	HWR
TLS	MBN	JAC
PFR	KEL	TLT
JAR	PRG	PER
PRD	GEN	GEN
PRF	GEN	GEN
CAB	VIR	DMD

U.S. Department of Transportation

Office of the Administrator

Washington, D.C. 20590

FEB 11, 1991

The Honorable Michael P. Lane
Secretary, Illinois Department
of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

Dear Mr. Secretary:

Thank you for your letter concerning discretionary funding for the development of Chanute Air Force Base (Chanute) and seeking an expression of our willingness to consider reimbursement of eligible expenditures outside the State Block Grant Pilot Program.

I agree that military air bases can make significant contributions to national civilian aviation, and that their development presents some extraordinary funding needs. In establishing the Military Airport Program under the Aviation Safety and Capacity Expansion Act of 1990, the Congress also declared as a matter of policy that "special emphasis should be placed on the conversion of appropriate former military air bases to civil use and on the identification and improvement of additional joint-use facilities." Accordingly, I have reconsidered my position in my September 24, 1990, letter and now agree that the allocation of funds for the development of former and existing military air bases outside the block grant program is warranted.

As you know, the Military Airport Program requires the designation of not more than eight current or former military airports for participation in the military airport set-aside. In selecting airports for participation in the grant set-aside program, the Secretary is to consider only those current or former military airports whose conversion in whole or in part to civilian commercial or reliever airports as part of the national air transportation system would enhance airport and air traffic control system capacity in major metropolitan areas and reduce current and projected flight delays. We are presently developing implementing criteria to assist us in designating the eight military airports required by the statute. The first two participating airports must be selected by May 5, 1991 (the remaining six by September 30, 1992). Chanute Air Force Base will certainly be considered in this process.

DOCUMENT 2

2

Of particular interest in your letter is the reference to Chanute's potential as a center for fire/crash/rescue training. Another major change in the authorizing legislation for the grant program is the inclusion, within the definition of eligible airport development, of the construction of fire fighting training facilities on or off the airport. Such a center could be used to provide fire fighting training to airport fire fighting personnel across the country. Chanute could become an important national civil aviation asset in this regard.

With respect to your specific request for discretionary funds for planning and engineering, I reiterate what I stated in my September 24, 1990, letter, again recognizing your sense of urgency in getting Chanute ready for civilian use. The preparation of an airport layout plan, certain elements of a master plan, and an environmental assessment are essential to ensure the successful conveyance of all requested property and the ability to proceed with construction and civil uses as soon as possible. I urge you to participate, to the greatest extent practicable, as a cooperating agency in the Air Force environmental impact statement for base reuse. Such early environmental study of civil development shown on the airport layout plan may obviate later environmental assessments on specific projects. I would also urge that the State or the village of Rantoul secure a commitment from a major tenant prior to incurring costs, including engineering costs, for a major runway extension. Such a commitment would demonstrate a need for the project and provide justification for a Federal investment.

Sincerely,

James B. Busey
Administrator

March 27, 1991

Lt. Col. Tom Bartol
Director Environmental Division
AFRCE-BMS/DEV
Norton AFB, California 92409-6448

Dear Colonel Bartol:

The Department has reviewed the Draft Environmental Impact Statement for the Disposal and Reuse of Chanute Air Force Base, Illinois. We offer the following comments for your consideration.

GENERAL COMMENTS

- 1 o The proposed Airport Layout Plan (ALP) has been revised (copy enclosed) with respect to three specific areas:
 - 1) The triangular shaped area, west of Heritage Lake and Landfill Site 3, southeast of Perimeter Road, and north of Chandler Road, which includes Fire Protection Training Area 2 and Landfill Site 2 is now within the boundary of the ALP.
 - 2) The area in the northwest part of the base which includes the fire house and civil engineering building is no longer within the boundary of the ALP.
 - 3) Jackson Hall is now within the boundary of the ALP.
- 2 o These changes should be incorporated into the appropriate discussion and exhibits of the FEIS. However, these changes should not effect the environmental impact analyses provided in the DEIS.
- 2.6 o An "Environmental Study for the Conversion of 345 Acres of Agricultural Land Adjacent and Directly East of Chanute Air Force Base for Development and the Associated Roadway Work", March 19, 1991 has been completed by the Department. The study identifies, evaluates, and includes coordination for this land use conversion with respect to applicable Illinois state environmental laws. The information provided in this study should be incorporated in the FEIS.

DOCUMENT 3

Lt. Col. Tom Bartol
March 27, 1991
Page 2

- 3 o The roadway analysis in the DEIS concludes that Chandler Road and Maplewood Drive would have only marginally acceptable peak-hour traffic conditions by 1999 if the proposed action were implemented. The Department is reviewing the traffic information provided in the DEIS. Our preliminary analysis indicates that intersection capacity as well as the roadway capacity should be studied to determine anticipated impacts.
- 6.7 o Also, the ratio of 4.7 trips per employee for the Proposed Action agrees with the current trip productions, but 11.4 trips per employee for the Minor Maintenance Facility alternative seems high. An explanation of these different production rates should be included in the FEIS.
- 6.2 o The baseline used for the assessment of impacts was identified as "1993 closure" in the DEIS. There appears to be an inconsistency between the baseline information presented in the DEIS and the Socioeconomic Impact Analysis Study. For example, Table S-1 of the DEIS identifies the Proposed Action as having a population increase of 5,790 in Rantoul using "1993 closure" baseline. However, Table 4.1-3 of the Socioeconomic Study indicates a population increase of 1800 in Rantoul from 1993 levels.
- 1.5 o In addition and in relation to the baseline, there appears to be an inconsistency in the comparison of impacts for the alternatives in the DEIS. For example, Table S-1 of the DEIS identifies the No Action Alternative using "actual 1993 closure levels" to have no impact. Therefore, the No Action impacts at "actual 1993 closure" appear to be compared to the Proposed Action impacts at pre-closure. This inconsistency should be revisited.

SPECIFIC COMMENTS

- 7 o Pages 1-8 through 1-11. Table 1.5-1. This table should identify the Illinois state regulations, etc., provided in the Department Environmental Study.
- 5.4 o Page 3-3. Last Paragraph. The Village of Rantoul's economy is characterized as more dependent on industrial (9,015) jobs than governmental (8,650) jobs which is not the case. A more appropriate characterization would exclude some firms listed and the associated number of jobs, i.e., Carle Hospital/Clinic, Kraft Inc., J.M. Jones and Colwell Systems, which are not in Rantoul.
- 4.2 o Page 4-13, 4.2.3 Transportation. Although not evaluated in the DEIS, the Proposed Action and the Minor Maintenance Facility alternative would likely result in an increase in use of local rail and passenger air travel service. Also, the No Action alternative would likely result in a reduction of passenger air travel at Millard Airport, which could lead to a loss of jet service availability.

Lt. Col. Tom Bartol
March 27, 1991
Page 3

- 9 o Page 3-6, 3.2.3.1 Land Use. Aviation Support and Education/Training. The discussion states that aviation support areas occupy a large portion of land at Chanute AFB. The small amount of land identified for aviation support on Figure 3.2-3 appears to be inconsistent with this statement.
- 5.6 o Page 3-23, 3.2.4.2 Airspace/Air Traffic, paragraph 2, line 7. The word "visual" should be changed to "very high."
- 6.3 o Page 3-46, paragraph 2. The discussion of the MOU seems out of context. Perhaps some elaboration on the purpose of the MOU would be helpful.
- 8.11 o Page 3-62, 3.4.2.3 Groundwater. This discussion should state that there is no aquifer designated by the EPA as a sole or principal drinking water resource for the area pursuant to section 1424(e) of the Safe Drinking Water Act, as amended.
- 10.4 o Page 3-73, 3.4.5 Biological Resources. Suggest "American slough grass (*Breckmannia syzigachne*)" be deleted from the discussion. Currently, it is one of the rarest grasses in Illinois and is known only from the Chicago region (Cook and Lake Counties). There are no records of this species from this region of the state. This species has never been a dominant grass in the Illinois tall grass prairie.
- 13.3 o Page 3-73, 3.4.5.1 Vegetation, last line. "Eustoma" does not occur in Illinois.
- 13.4 o Page 3-78, 3.4.5.3 Threatened and Endangered Species. Coordination with the IDOC should be noted.
- 13.5 o Page 3-81, Figure 3.4.3. In order to provide clarification, it would be good to identify the location of the various wetland types discussed on page 3-80.
- 14 o Page 4-5, 4.2.2.1. Proposed Action, Land Use. Suggest the following information be used rather than the fourth dot point: "The Proposed Action would require aviation easements totaling approximately 20 acres at the north end and 7 acres at the south end of runway 10/36. These areas include the Runway Protection Zone (RPZ) and may restrict future land uses and activities. FAR Part 77 Regulations control the heights and locations of structures and recommend types of activities that can occur in the zone to minimize safety hazards. These areas would not generate a major impact."
- 5.7 o Page 4-5, 4.2.2.1. Proposed Action, Land Use. Suggest the following information be used rather than the fourth dot point: "The Proposed Action would require aviation easements totaling approximately 20 acres at the north end and 7 acres at the south end of runway 10/36. These areas include the Runway Protection Zone (RPZ) and may restrict future land uses and activities. FAR Part 77 Regulations control the heights and locations of structures and recommend types of activities that can occur in the zone to minimize safety hazards. These areas would not generate a major impact."

DOCUMENT 3

Lt. Col. Tom Bartol
March 27, 1991
Page 4

- 18 o Also, the seventh dot point should mention the widening of US 136.
- 6.8 o Page 4-13, 4.2.3 Transportation. Although not evaluated in the DEIS, the Proposed Action and the Minor Maintenance Facility alternative would likely result in an increase in use of local rail and passenger air travel service. Also, the No Action alternative would likely result in a reduction of passenger air travel at Millard Airport, which could lead to a loss of jet service availability.
- 6.4 o Page 4-15, paragraph 3. The DEIS predicts 10,000 AADT on Township Road 1800 East for the year 2014. The Socioeconomic Report predicts 7,000 AADT on the same road. This inconsistency should be revised.
- 20 o Page 4-29, Air Transportation. The text states that the Millard Airport passengers-per-capita in 1988 (without Chanute's contribution) was 0.913. The source of this information should be referenced. Also, this information raises the question of whether Millard Airport has enough capacity to expand.
- 6.5 o Page 4-64, first paragraph. The reference to FAA standards for construction should specifically identify FAA Circular 5370.10.
- 23 o Page 4-68, 4.4.3.1 Proposed Action, Construction, paragraph 2. It would be more accurate to state that there may be construction of a new baffled firing range, and the construction may be within the next ten years.
- 3.2 o Page 4-80, Hearing Loss. The specific EPA guidelines should be referenced.
- 12.1 o Page 4-89, Mitigation Measures. Suggest the following information be used rather than the text provided: "No conflicts with the FAA land use compatibility guidelines contained within FAR Part 150 have been identified for the Proposed Action. The airport proponent could voluntarily pursue a future FAR Part 150 Study for analyzing operational and facility modifications to reduce aviation noise levels below DNL 65 dB."
- 12.2 o Page 4-97, Vegetation. It would seem appropriate to quantify by type and acreage the loss of vegetation.
- 13.6 o Page 4-97, Vegetation. It would seem appropriate to quantify by type and acreage the loss of vegetation.

Lt. Col. Tom Bartol
March 27, 1991
Page 5

- 13.3 o Page 4-97, Vegetation, paragraph 2. Based on information obtained from the Illinois Natural History Survey, prairie remnants are not present in the proposed project area and a field survey is not necessary.
- 28 o Page 4-102, 4.4.6 Cultural Resources, paragraph 3. "Mitigation" as used in the 106 Process does not alter the evaluation of effect. Effect is either adverse or it is not. If not, mitigation is not required. If potentially adverse, avoidance or mitigation comes into play.
- 14.3 o Overall, we are concerned that the baseline used for the impact assessment in the DEIS be clear to the reviewer and that consistency of baseline between the DEIS and the Socioeconomic Impact Analysis Study be established. Also, it would seem appropriate to incorporate more site specific information obtained from the Village of Rantoul in the analysis of the No-Action Alternative beyond the 1993 closure levels.

Thank you for the opportunity to review the DEIS for the Disposal and Reuse of Chanute Air Force Base.

Sincerely,


Dan Dees, Deputy Director
Planning and Programming

13401



STATE OF ILLINOIS
OFFICE OF THE GOVERNOR
SPRINGFIELD 62706

J.W. Kossen
5-1-1991

April 4, 1991

Lt. Colonel Thomas Bartol
Director, Environmental Division
Department of the Air Force
Norton Air Force Base, CA 92402

Dear Colonel Bartol:

I appreciate the opportunity to comment at this public hearing reviewing the Draft Environmental Impact Statement required in the closure of the Chanute Air Force Base. The successful conversion of this prominent military facility to civilian use, avoiding adverse effects to the local environment, is certainly a priority of my administration. The economic survivability of Rantoul, Illinois, depends upon the continued support and cooperation of the Department of Defense.

I would like to point out some issues that I feel must be addressed by the Air Force prior to a decision for base closure:

- * Departments of Defense and Air Force cooperation in review and acceptance of re-use or joint use proposals is vital. Commitments for future military use of the proposed National Aviation Center and its programs will greatly enhance the project.

- 3.6
- Technical training equipment is a major component of the development of successful aviation training programs. I urge the U.S. Air Force to work with the appropriate local re-use authorities in an effort to identify equipment that could be used in future training programs at the proposed National Aviation Center. Direct purchase of equipment such as firefighting apparatus and specialized vehicles is costly and could prohibit proposed base re-use efforts.
 - Transfer of ownership of facilities at no cost public benefit transfer, or minimal cost to the interested party, consistent with the base re-development effort is strongly urged.

Lt. Colonel Thomas Bartol
April 4, 1991
Page 2

The state of Illinois will continue to assist the village of Rantoul and the people of east central Illinois in their efforts to develop a National Aviation Center. Success can only be achieved with the continued cooperation and support of the Department of Defense.

Jim Edgar
Sincerely,
Jim Edgar
Governor



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

200 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF

APR 19 1991

Lt. Colonel Thomas J. Bartol
Director of Programs and Environmental Division
AFRCE-BPA/DSV
Norton Air Force Base, California 92409-6448

RE: Draft Environmental Impact Statement for Disposal and Reuse of Chanute Air Force Base, Illinois

Dear Lt. Colonel Bartol:

In accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, we have revised the Draft Environmental Impact Statement (DEIS) concerning the Disposal and Reuse of Chanute Air Force Base located in Rantoul, Illinois.

Four alternatives were discussed in the DEIS; 1) the Proposed Action including a major aircraft maintenance facility consisting of redevelopment of Chanute AFB for aviation-related activities, education and training, light industrial enterprises, health care, recreational and residential use and may include proposals for transfer of portions of the base to federal agencies, 2) the redevelopment of the base to provide minor aircraft maintenance operations, 3) the redevelopment of the base with non-aircraft land uses such as industrial, educational/training, hospital/life-care, recreational, and residential uses, 4) the no-action alternative, which entails the base remaining under Federal control and being placed in caretaker status.

Our comments will address environmental issues of concern regarding, 1) the environmental impacts associated with construction concerning the reuse of Chanute AFB, and 2) the environmental impacts associated with the reuse alternatives (specifically, Alternative One, the proposed plan) of Chanute AFB.

CONSTRUCTION

There will be environmental impacts associated with construction at the base for all of the Alternatives except for Alternative Four, although Alternative One will result in the greatest number of adverse effects. The DEIS identifies adverse environmental impacts due to construction which include, surface and near-surface groundwater flow in the airfield area, non-point stormwater discharge degrading surface and groundwater in the acquired off-base areas, air quality deterioration due to the emission of particulates, runoff adding sediments and pollutants into the tributary to Upper Salt Fork Creek and/or adjacent wetlands and large amounts of erosion due to fragile soils. The DEIS also identifies adequate mitigation measures to minimize the adverse impacts.

No wetland fill will be required for project construction, however, there may be adverse impacts to water quality. The DEIS states that the tributary to the Upper Salt Fork Drainage Ditch and adjacent wetlands are to be protected from runoff during construction by the placement of temporary berms. We suggest that a buffer strip of native vegetation at least 100 feet wide be permanently maintained in areas where wetlands, tributaries, streams and any other body of water are subject to stormwater runoff. There should be an easement placed in the ditch which provides for a permanent buffer zone to be maintained. This would ensure that adverse impacts to water quality continue to be minimized after project completion.

WATER

2 The closure and reuse of Chanute AFB could have significant impacts concerning the capability of Rantoul's Wastewater Treatment Plant (WWTP) to operate, due to a reduction in flow of approximately fifty percent (under Alternative One). The Rantoul WWTP will have to be modified in order to provide adequate treatment, should there be an increase in demand. Assurance must be provided that water quality will be met to protect the criteria established for all impacted waters, including the man-made ditch, the unnamed tributary of Upper Salt Fork Drainage, the Upper Salt Fork Creek, and the Vermilion River. Permit limits should be evaluated on projected flows with the new established allocations being done to establish the total maximum daily loads.

3 We are also concerned with the treatment and disposal of wastewater from the industrial and commercial facilities, as well as stormwater runoff from industrial parking facilities. Prior to discharge, methods to achieve the water quality standards need to be evaluated and discussed in the Final EIS.

- 4 The DEIS discusses the possibility of runway expansion where the tributary to
10.3 the Salt Fork Creek flows eastward through the southern portion of the 235-acre parcel. An investigation must be made as to how the tributary will be rechannelled (through sewer pipe, culvert, etc.) and impacted. There should be a mitigation plan for the loss of habitat due to the runway extension. An investigation must be made concerning whether the runoff from the runway will be discharged into the tributary and what the impacts of this will be. If drainage is altered, an investigation should be made concerning the impacts of the flow change and how the aquatic system will be affected.
- 5 The DEIS discusses the possibility of demolition and renovation of buildings with asbestos-containing materials. There should be an investigation of the possibility of expanding existing facilities to meet the needs of increased usage, without disturbing asbestos and creating environmental disposal/remediation. If buildings containing asbestos must be demolished, a landfill permitted to take special wastes should be identified prior to demolition.
- 6 The DEIS discusses the possibility for the increased use of herbicides and 8.13 pesticides. Measures should be taken to ensure that water quality is not adversely impacted as a result of increased usage. As mentioned above, the use of filter strips can also reduce the impacts on water quality. The DEIS also discusses the loss of trees and vegetation during construction. The 13.7 landscaping plans discussed in the DEIS concerning reuse should include the replanting of any trees lost to construction. The central plant mentioned in the DEIS is coal-fired. We suggest that this plant be converted to another fuel such as oil or natural gas to improve air quality. Should new facilities 7.8 be constructed, an investigation should be made as to possible energy conservation measures. New structures should be insulated with superinsulation and the use of "Greenlights" (energy efficient lighting) should be implemented.
- The DEIS discusses the removal of all Underground Storage Tanks (USTs) not implemented in the reuse plans along with the removal of all PCB-contaminated equipment. The Hazardous Waste Storage Facility will be undergoing a RCRA closure for the Hazardous Waste Storage areas in the near future. The DEIS satisfactorily identify and characterize the environmental contamination at the base and scheduled for remediation under the hazardous waste closure activity.
- 9 The DEIS discusses the possibility of noise overflight affecting the sleep of 12.3 some residents during the summer months. The mitigation measures presented in the DEIS should be implemented to reduce the effects of airport noise.
- 10 The DEIS mentions that there are several hazardous waste sites located near 8.14 wetlands which may currently or in the future impact the quality of these habitats. Coordination with should continue concerning potential wetlands

11 impacts at these sites. Also, it is our understanding that all IRP sites will be remediated before final transfer of the property is completed.

12 The DEIS discusses open space areas for recreation which would also benefit the wildlife on base. We suggest that the buffers planned between facilities be connected in such a way that wildlife has a connected corridor throughout the base, leading to open space areas. Consideration should be given to developing habitat that allows for the greatest variety of species (plants and animals). Biodiversity will benefit the environment through balancing man's activities with the environment.

We appreciate the opportunity to review the DEIS for the closure and reuse of Chanute Air Force Base. Based on our review, we have rated this project "EC-2". This rating indicates that we have environmental concerns (EC) relative to this project. The "2" indicates that there is a need for additional information. Our concerns will be eliminated after additional information is provided. We look forward to reviewing the results of both the radon and asbestos surveys along with any other reports relating to environmental impacts mentioned in the DEIS. The mitigation measures discussed in the DEIS concerning adverse impacts associated with airport noise, air, soil, and water quality should be implemented. Should you have any questions regarding these comments, please contact Carol Alexander at (312) 886-4244.

Sincerely yours,

William D. Franz
William D. Franz, Chief
Environmental Review Branch



State of Illinois DEPARTMENT OF AGRICULTURE

Division of Natural Resources
State Fairgrounds, P.O. Box 19281, Springfield, IL 62794-9281, 217-782-6297

Bureau of Farmland Protection

Bureau of Soil Conservation

April 1, 1991

Lt. Colonel Tom Bartol
Director of Programs and Environmental Division
AFRCE - BMS DEP
Norton AFB, California 92409-6448

Re: Draft Environmental Impact Statement
Disposal and Reuse of Chanute Air Force Base
Rantoul, Illinois

Dear Colonel Bartol:

The Illinois Department of Agriculture has reviewed the Draft Environmental Impact Statement (DEIS) prepared for the disposal and reuse of Chanute Air Force Base. We are providing the following comments on that document.

1. Natural Environment, second paragraph, page S-7

The statement is made that minor or no impacts on various resources, including soils, are expected with the Proposed Action alternative.

1. IDOA COMMENT: There will be at least 576 acres of prime farmland which will potentially be converted to non-agricultural uses by the Proposed Action alternative. The IDOA feels the conversion of 576 acres of prime farmland constitutes a major natural resource impact and it should be identified accordingly in the Final EIS.

2. Natural Environment, second paragraph, page S-8

The statement is made that minor or no impacts on various resources, including soils, are expected with the Minor Aircraft Maintenance Operations alternative.

2. IDOA COMMENT: Similar comments as stated in #1 above, except as they pertain to the potential conversion of 231 acres of prime farmland.

3. Table 1.5-1. Relevant Federal, State, and Local Statutes, Regulations, and Guidelines, page 1-11

The Table summarizes relevant federal, state, and local statutes, regulations, and guidelines which the proponent and cooperating agencies must comply with as related to the disposal and reuse of Chanute AFB.

Colonel Bartol
Page 2
April 1, 1991

- 3 IDOA COMMENTS: Federal, state, and local regulations pertaining to the soil resources were omitted from the Table. They are as follows.
- 5.4 Resource : Soil Resources
Project Activity : Purchase and development of agricultural land adjacent to Chanute AFB for project purposes.
Regulation/Authority : Farmland Protection Policy Act, 7 U.S.C. §§4201 et seq., Farmland Preservation Act, Ill. Rev. Stat. Ch. 5, §§1301 et seq.
Agency : USDA Soil Conservation Service, Illinois Department of Agriculture.

4. Table 2.6-2. Summary of Influencing Factors and Environmental Impacts of the Proposed Action and Alternatives for Reuse of Chanute AFB, page 2-32

The Table summarizes the environmental impact to soils as being a minor increase in runoff and erosion during construction.

4. IDOA COMMENT: For the Proposed Action and the Minor Aircraft Maintenance Operations alternatives, the IDOA would ask that the acreage of prime farmland conversion also be listed as an environmental impact relating to the soils. It is evident that the soil resources will sustain the major natural resource impact should either of these two alternatives be constructed.

5. Geology and Soils, pages 4-42, 63

5 IDOA COMMENTS: No indication is given regarding the quality of soils that will be impacted by the Proposed Action and the Minor Aircraft Maintenance Operations alternatives. Since Champaign County has a completed and published modern soil survey, it is possible to identify the acreage and prime status of all soil types which will undergo possible conversion to non-agricultural uses for the Proposed Action and the Minor Aircraft Maintenance Operations alternatives. To accurately assess the impact the disposal and reuse of Chanute AFB would have upon the soil resources, we feel the following information should be provided for any alternative requiring the acquisition of additional agricultural land.

1. Acres of each soil type to be purchased.
2. Status of each soil type (Prime, Important, Other).

6. Also, no mention is made regarding the potential disturbance of subsurface tile drainage systems on agricultural land located on base and on adjacent lands to be purchased for the Proposed Action and the Minor Aircraft Maintenance Operations alternatives. Pending on fields upstream of any damaged tile lines, will incur detrimental economic impacts to affected landowners due to reduced crop yields.

Colonel Bartol
Page 3
April 1, 1991

Please address these comments of the Illinois Department of Agriculture in the Final Environmental Impact Statement which is prepared for the disposal and reuse of Chanute Air Force Base.

Sincerely,

James R. Hartwig
James R. Hartwig
Bureau of Farmland Protection

JRH:mdg

cc: Terry Schadell, IDOT
Champaign County SWCD
Alan Guilo, IDOA



United States Department of the Interior

OFFICE OF THE SECRETARY
OFFICE OF ENVIRONMENTAL AFFAIRS
130 S. DEARBORN, SUITE 5422
CHICAGO, ILLINOIS 60604

ER 91-270

April 22, 1991

Lt Col. Thomas J. Bartol
Director of Programs and
Environmental Division
AFRCE-BMS/DEV
Norton AFB, California 92409-6448

Dear Colonel Bartol:

This is in response to the request for the Department of the Interior's comments on the Draft Environmental Statement for Disposal and Reuse of Chanute Air Force Base, Champaign County, Illinois.

The draft statement adequately addresses all environmental matters of concern to this Department.

Thank you for the opportunity to provide these comments.

Sincerely,

Sheila Minor Huff
Sheila Minor Huff
Regional Environmental Officer



Old State Capitol • Springfield, Illinois 62701 • (217) 782-4836

Champaign County
Rantoul
Chanute AFB DEIS for Disposal and Reuse Alternatives

April 23, 1991

Lt Col Tom Bartol
Director of Programs and Environmental
AFRCE-BMS/DEV
Norton AFB, California 92409-6448

Dear Lt Col Bartol:

1 We have reviewed the referenced DEIS. The procedures concerning cultural resources appear to be adequate, provided that this office continues to be consulted concerning identification, evaluation and treatment of cultural resources at Chanute prior to completion of the FEIS.

If you have any questions, please call William J. Callahan, Cultural Resources Assistant, at 217/785-4512.

Sincerely,

Theodore W. Hild
Theodore W. Hild
Deputy State Historic
Preservation Officer

TWH:WJC:kh



STATE OF ILLINOIS HOUSE OF REPRESENTATIVES



COMMITTEES
HOUSING
ADJUDICARY
REAL ESTATE LAW
RULES

COMMISSION
LEGISLATIVE AUDIT
COMMISSION

TIMOTHY V. "TIM" JOHNSON
ASSISTANT REPUBLICAN LEADER
104TH DISTRICT

March 28, 1991

Lt. Col. Tom Bartol
AFRCE-BMS/DEV
Norton Air Force Base, CA 92409-6448

Re: Disposal and Reuse, Chanute AFB, IL

I, Representative Timothy V. Johnson, State Representative 104th legislative district in Illinois wish to state my full support for the Proposed Action, which is the disposal and reuse of Chanute AFB as a major aircraft maintenance facility. As the Draft Environmental Impact Statement and the Socioeconomic Analysis indicate, the interests of the citizens of the 104th district, especially the Village of Rantoul, will best be served through implementation of the Proposed Action. On behalf of the citizens of district 104 I urge you to approve and authorize the Proposed Action of disposal and reuse of Chanute AFB as a major aircraft maintenance facility. Thank you for your attention to this matter.

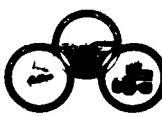
Sincerely,

Timothy V. Johnson

Rantoul Area Chamber Of Commerce
Home of Chanute Air Force Base

117 N GARRARD STREET RANTOUL ILLINOIS 61866

PHONE 833-3323



PUBLIC HEARING
FOR
CHANUTE AIR FORCE BASE
DRAFT ENVIRONMENTAL IMPACT STATEMENT

MARCH 27, 1991

Robert G. Kidd
Executive Vice President

Gentlemen:

As the director of the Rantoul Area Chamber of Commerce, I have the responsibility to assure you the specific concerns expressed here this evening are of vital importance to the business community. The Chamber of Commerce stands in full support of the ULI and EDW studies, as well as the concerns and proposals of the administration and representatives of the Village of Rantoul.

- 1 I will not delve into specifics better addressed by others but the "chamber" does have a problem with attempts to separate environmental and socio-economic impacts, an artificial if not impossible division.
- 1.3 The business community is vitally concerned with the prompt, efficient and coordinated re-development and re-use of the base property and facilities upon closure, because, only in this way can serious economic loss be reduced or averted. Paramount in importance in this re-development is marketability.
- 2 Marketability, an admittedly socio-economic factor, cannot be separated from environmental concerns. What prospective purchaser, with today's environmental laws and concerns, will be seriously interested in property that is less than totally safe and clean? And if such a prospect is found, what happens to the market value of a property less than "clean", especially if remodeling is required? Will the government's "cost reduction program" adequately and fairly take into account such items as asbestos removal, utility lines, metering, etc?
- 3.4 Some of the same concerns are found in the community's perception of "caretaker status" and how it will affect the appearance and marketability of properties.
- 3.5 Another item creating confusion is in the inconsistent use of "datelines" from 1977 to 1994 as well as the long-range projections for 2014. The business community of today is primarily concerned with their immediate future; today, tomorrow, even 5 to 10 years "down the road" and how they are going to be able to plan and prosper during this time frame.

Gentlemen, your assignment is an enormous one and we appreciate your efforts, but the job the community faces in survival and re-development is also a formidable task. We, as a community, look to you for answers and for your help; if we appear to be confrontational and take an adversarial position, please try to understand we are fighting for our lives, our very existence.



March 27, 1991

Lt. Col. Thomas J. Barol
Director of Programs and Environmental Division
AFRCE-BMS/DEV
Norton Air Force Base, California 92409-6448

RE: Draft Environmental Impact Statement
Disposal and Reuse of Chanute Air Force Base, Illinois
and
Chanute Air Force Base Socioeconomic Impact Analysis

Dear Sir:

As engineer for the Village of Rantoul, Illinois, I am submitting herewith the following comments, questions and documentation related to the referenced reports:

1. Summary of Oral Remarks presented at Public Hearing.
2. Village of Rantoul Position Statement on Infrastructure Transfer & Responsibility.
3. Questions and Comments concerning Draft Environmental Impact Statement.
4. Questions and Comments concerning Socioeconomic Impact Analysis.
5. Engineering evaluation entitled Analysis of Impacts on Wastewater System due to Closure of Chanute AFB, Illinois.

I request a response to these questions and comments as soon as possible.

Sincerely,

Michael R. Little, P.E.
Village Engineer

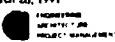
PUBLIC HEARING
DRAFT ENVIRONMENTAL IMPACT STATEMENT
March 27, 1991

SUMMARY OF ORAL COMMENTS
Michael R. Little, P.E.
Village Engineer

My name is Michael R. Little and I am here tonight representing the Village of Rantoul as Village Engineer and as Chairman of the Public Works Committee. I am submitting written copies of questions and comments relating to the Draft Reuse EIS and the Socioeconomic Impact Analysis Study, which are far too extensive to read at this time. However, I would like to summarize the major areas of concern to the Village.

My first comments concern the Draft EIS.

1. Modifications to various components of the Regional Wastewater Treatment Plant and on-base collection systems must be made under all "alternatives". These modifications are detailed in a study entitled ANALYSIS OF IMPACTS ON WASTEWATER SYSTEM DUE TO CLOSURE OF CHANUTE AFB, a copy of which is attached for reference. Required modifications to the WWTP and the Chanute collection system should be as detailed in section 4.2.4.4 of the EIS. Section 4.2.4.4 is the only location in the report that accurately depicts the proper modifications.
2. In "Appendix G - Air Force Policy - Management of Asbestos at Closing Bases", Policy #6 states that "friable asbestos, or asbestos that will probably become friable, that has been stored or disposed of underground ... will be properly disposed of." Does this policy apply to the buried steam lines? If so, when will these lines be removed? Policy #7 states that the course of action will be followed, with respect to asbestos at the closing installation, "will be analyzed in the Disposal and Reuse Environmental Impact Statement". The only thing this EIS says about asbestos is that "An asbestos assessment plan is due in April, 1991." Is that inadequate analysis adequate to fulfill the requirements of this clause? It would seem logical that the issue of asbestos in buildings proposed for reuse would have a major impact on the real value of those buildings. Also, in the case of abandoned buried steam lines, buried asbestos left behind and not properly disposed of leaves a potential liability.
- 3.8.3



4 problem for future occupants of the property. The Village believes this EIS should
 8.4 reflect the ramifications of what is and isn't removed under the asbestos abatement
 plan. When will the asbestos abatement plan be available for public review? Is an
 economic analysis to determine the feasibility of asbestos removal from buildings
 prior to sale a part of the asbestos abatement plan? The Village of Rantoul hereby
 requests a copy of that plan.

- 5 3. The Village's position is that all UST's should be removed prior to closure.
 8.1 Increasingly complex compliance standards will make any remaining tanks a liability
 to future potential owners. If the Air Force desires to maintain the marketability of its
 properties, these tanks should be removed now, or replaced with new systems that
 can meet all future regulations.
- 6 4. As part of the IRP program, a Remedial Investigation Data Summary Report is due to
 8.6 be completed "spring 1991". Is this complete? The Village of Rantoul hereby
 requests a copy when it becomes available.
- 7 5. A radon survey is scheduled for 1991. What is the status of this survey? The Village
 8.6 of Rantoul hereby requests a copy of that survey.

- 8 6. Concerning the overall question of the disposition of the base infrastructure, the
 7.9 Board of Trustees of the Village of Rantoul has formally adopted the following
 position statement:
VILLAGE OF RANTOUL POSITION STATEMENT
CHANUTE REUSE
INFRASTRUCTURE TRANSFER & RESPONSIBILITY

- 9 7. Concerning demolition of existing buildings, the EIS should be revised to reflect the
 3.1 requests that have been made by the Village for specific buildings that are undesirable
 10 and pose a potential environmental hazard. In addition, the interference of the
 5.8 abandoned structures at the old Main Sewage Treatment Plant with the east-west
 runway clear zones should be addressed.

My remaining remarks concern both the Draft EIS and the Socioeconomic Impact Analysis Study.

- 11 1. The EIS and the Socioeconomic Analysis should present a third level of comparison,
 1.1 the preclosure conditions, to the baseline and reuse alternatives. Without this level of

Presentation

2 of 3

March 26, 1991

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comparison these reports provide a decidedly distorted view of the real impacts on the
 community. For example, in Section 4.0 Environmental Impacts of the
 Socioeconomic Analysis, comparisons are presented concerning jobs created by the
 proposed alternatives. For the proposed action a reference is made to preclosure
 employment levels stating that the anticipated employment figures represent a 2%
 increase over preclosure levels associated with Chanute AFB. In the discussion of
 the other three alternatives, no mention is made of the 72%, 88% and 99.4%
 decreases in employment levels as compared to preclosure, Chanute related jobs. The
 methodology used to estimate staffing levels is another example. Using ratios based
 upon population may work fine in areas with hundreds of thousands or millions of
 people, but it doesn't work here. The report states that for the Non-Aviation
 Alternative, "current public service levels could be maintained" with 51 or half the
 number of Village employees. Just because half the people move from a
 neighborhood, doesn't mean that you can close half the streets or abandon half the
 water main. Managing water and wastewater treatment plants takes very nearly the
 same staff size regardless of the flow in or out. The Village is more than willing to
 work with the Air Force's contractor to see to it that accurate cost data appears in this
 report.

- 12 1. The Village of Rantoul must rely on the information you present when it tries to
 1.1 convince Federal and State Agencies of the need for assistance. As these documents
 stand, they portray a post closure scenario of little or no real economic impact on the
 Village. The Socioeconomic Analysis is particularly flawed and slanted to minimize,
 or even ignore, the hard realities that face the Village of Rantoul. For example, the
 Socioeconomic Report Summary section, which is about as far as most bureaucrats
 bother to read, doesn't even mention the No-Action Alternative and its devastating
 effects on the community. In every section, on nearly every page the information
 presented and the language used downplay the negatives and highlight the positives.
 The Air Force has already decided to abandon Chanute. What difference does it make
 if you present the truth about the impacts of that decision.

Presentation

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March 26, 1991

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13 VILLAGE OF RANTOUL POSITION STATEMENT
 7.9 CHANUTE REUSE
 INFRASTRUCTURE TRANSFER & RESPONSIBILITY

General Position Re: Utilities and Streets

The Village of Rantoul is willing to accept responsibility for the appropriate public portions of the streets, water, sanitary sewer, storm sewer and electric systems provided:

1. The Air Force conveys to the Village the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village.
2. The Air Force will cooperate with the Village in the public benefit transfers that the Village deems appropriate for the overall good of the community, and as recommended under the EDAW, ULI and CMT studies, and
3. The Air Force will participate in the support of the systems as detailed in the following individual descriptions.

Water, Storm Sewer, Sanitary Sewer and Electric Systems

The Air Force agrees to support the operation of each of these systems by paying a user fee for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force properties. This fee will be based upon the Village's estimated annual operation and maintenance cost for the on-base system, with a credit based upon the level of reuse that occurs. In the case of the wastewater system, the user fee will be determined in accordance with the conditions of the contract between the Village and Air Force.

If the Air Force chooses to sell the water, sanitary, or storm system to a third party, the Village will consider that organization a franchisee of the Village. No water or sewage treatment facilities, not owned by the Village, will be allowed to operate within the Village limits. The Village assumes that they will become the owner and operator of the public portions of the electric system.

Rantoul Municipal Landfill

The Village of Rantoul's closure/post-closure plan under the Village's Illinois EPA permit to operate the Rantoul Municipal Landfill stipulates that the landfill will close April 1, 1995. This plan assumes no material increase in the amount or quantity of solid waste delivered to such landfill between the present time and such date. The President and Board of Trustees of the Village of Rantoul will adopt appropriate legislation consistent with such IEPA permit to restrict the quantity or amount of solid waste delivered to the Rantoul Landfill.

Steam System

The Village is not prepared to accept responsibility for any portion of the steam plant or the steam distribution system. The Air Force should provide a caretaker operation, as suggested in the Draft Environmental Impact Statement-Disposal of Chanute Air Force Base, Illinois-March 1991, for the complete steam system for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force's buildings, to allow time for the conversion of all buildings to individual HVAC systems. The Air Force shall maintain responsibility for the steam plant and distribution system, and shall properly dispose of the facilities when no longer needed.

Fire Protection and Security

Prior to accepting responsibility for these operations, the Village will expect the Air Force to agree to a level of support similar to that presented for the utility systems.

Other Considerations

1. Civil Engineers Office, computer system and records - The Village is requesting Buildings 55, 56 and 62, including all records, drawings, reports, etc., pertinent to the long term operation and management of the base facilities. Also included is the WIMS system, including any proprietary computer hardware and software.
2. Fire Station and Equipment - The Village is requesting Bldg. 43 and all equipment.

DRAFT ENVIRONMENTAL IMPACT STATEMENT
March 1991

DISPOSAL AND REUSE OF
CHANUTE AIR FORCE BASE, ILLINOIS

Review Comments by Michael R. Little, P.E.
 Engineer for the Village of Rantoul, Illinois
 March 27, 1991

SUMMARY

- 14 4.1 Table S-1 It would appear that a baseline population of 10,000 has been used to develop the information summarized in this table. However, other studies have placed the closure population of the Village as low as 5,000. What is the basis for the 10,000 estimate? Does it accurately reflect closure conditions?
- 15 7.4 p.S-6 thru S-8 Statements regarding the wastewater system, under all reuse alternatives, support the need for modifications to WWTF at all levels of reuse. This is the correct position, based upon the analysis of impacts to the collection system and treatment facilities conducted by the Village, a copy of which is attached for reference. However, this position is not accurately reflected throughout the following sections of the report. Those sections will be specifically addressed in following comments.
- 16 8.1 p.S-6 The last sentence on that page states that existing UST's must be upgraded or removed. The Village's position is that all UST's should be removed prior to closure. Increasingly complex compliance standards will make any remaining tanks a liability to future potential owners. If the Air Force desires to maintain the marketability of its properties, these tanks should be removed now, or replaced with new systems that can meet all future regulations.
- 17 8.1 p.S-7 & S-8 What is to happen to UST's under these alternatives? They aren't addressed in this summary for the Minor Aircraft Maintenance, Non-Aviation and No-Action Alternatives.

March 27, 1991

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1.0 Purpose & Need for Action

- 18 5.4 p.1-8 1.1 In the last item on this page, if it is not an alternative, parcelization is mandatory, unless the Air Force disposes of the entire base as one unit.
- Table 1.5-1 Where are the "relevant" local statutes such as the Rantoul Zoning Ordinance and the Rantoul Subdivision Ordinance? These affect land use.

2.0 Alternatives

- 19 7.4 p.2-13 2.2.11
 p.2-20 2.3.1.5
 p.2-25 2.3.2.10
 p.2-26 2.3.3 Modifications to various components of the Regional Wastewater Treatment Plant and on-base collection systems must be made under all "alternatives". These modifications will be necessary to accommodate the baseline flows at closure, none of the alternatives will produce flows high enough to eliminate low flow problems. The statements at these four locations are not consistent with the summary statements on p.S-6 thru S-8, which is the position the Village requires throughout this report. These four statements must be changed to state that modifications to the WWTF must be made to accommodate flow reductions under all future conditions.
- 20 7.6 p.2-26 2.3.3 last ¶ Numerous non-essential water lines would be drained and shut off. Depressurized lines cannot remain connected to the Village's water distribution system. These lines would be in violation of the Village's cross-connection control ordinance and the Illinois Pollution Control Board's cross-connection regulations, in that they could provide a source of contamination to the system.

3.0 Affected Environment

- 21 7.4 p.3-35 3.2.5.2 last ¶ Required modifications to the WWTP and the Chanute collection system should be as detailed in section 4.2.4.4. Section 4.2.4.4 is the only location in the report that accurately depicts the proper modifications.

- 22 7.2 p.3-42 3.2.5.4 last ¶ Calls for minimal space heating at closure. For how long will this heating be maintained? The Village supports this position.
- 23 3.5 p.3-45 3.3.2 The last ¶ states that all hazardous waste will be removed at the time of base closure. Will all of the accumulation & interim storage sites be completely closed out, in accordance with an approved closure plan, prior to base closure? If not, what impact will these sites have on reuse?
- 24 8.6 p.3-45 3.3.3 A Remedial Investigation data summary report is due to be completed "spring 1991". Is this complete? The Village of Rantoul hereby requests a copy when it becomes available.
- 25 8.1 p.3-52 3.3.4 Storage Tanks - Closure Baseline The Air Force intends to leave some tanks to "support reuse activities". As previously stated, the Village requests that all UST's be removed prior to closure, or replaced with systems fully capable of meeting all future monitoring requirements.
- 26 8.9 p.3-53 Table 3.3-2 Some of the UST's are indicated to be exempt from the regulations. Why are these tanks exempt?
- 27 8.15 p.3-54 Table 3.3-3 There are 13-1,000, 5-2,500, 1-5,000 and 2-240,000 gallon above ground tanks. Are these to be left behind? Many do not have containment systems and could pose a great liability to potential future owners. If these are left behind, the economic impact of this decision should be addressed in the Socioeconomic Analysis.
- 28 8.6 p.3-55 3.3.5 Asbestos - An asbestos abatement plan was due to be completed in April. When will it be available for public review? The Village of Rantoul hereby requests a copy of that plan.
- 29 8.6 p.3-57 3.3.6 Radon - A radon survey is scheduled for 1991. What is the status of this survey? The Village of Rantoul hereby requests a copy of that survey.
- 30 13.1 p.3-80 3.4.5 Wetlands - What "appropriate restrictions" might we expect due to the wetlands identified on-base? More detail should be provided, so that the potential effects of these restrictions can be properly identified within the proposed reuse alternatives. For instance, might the proposed runway

March 27, 1991

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improvements interfere with surface water runoff to the "wetland" area identified just south of the existing runway? Also, any economic impact of these restrictions should be addressed in the Socioeconomic Analysis.

4.0 Environmental Impacts

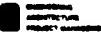
- 31 1.1 p.4-2 to 4-4 4.2.1 Community Setting - The "Proposed Action" alternate in 4.2.1.1 gives an employment comparison to preclosure levels indicating a 2-percent increase over preclosure employment. However the other three alternatives in 4.2.1.2, 4.2.1.3 and 4.2.1.4 do not even mention the preclosure comparison. To provide a consistent analysis of the four scenarios, the comparison to preclosure levels must be included throughout.
- 32 7.4 p.4-46 4.2.4.1, 4.2.4.2 and 4.2.4.3 Mitigations - As previously stated, for Wastewater these should all read the same as stated under 4.2.4.4. The remedial measures at the WWTP and in the on-base collection system need to be implemented for all reuse alternatives.
- 33 8.10 p.4-50 4.3 Hazardous Materials/Hazardous Waste - Under the assumptions made for this EIS it is stated that, "All existing contamination has been identified". Is this an accurate statement? The Village has received information from former base employees indicating that there may be other areas that were used for burial of hazardous materials. Has the Air Force investigated these allegations and included them in the IRP process? A copy of this information is being submitted under a cover letter from the Village.
- 34 8.8 p.4-50 4.3 Hazardous Materials/Hazardous Waste - How will interim users of on-base facilities be handled? The Village believes that the Air Force should remain responsible for interim usage.

Appendix G: Asbestos Policy

- 35 8.7 p.G-1 Asbestos Policy - Is there an appeal process available to the Village concerning the decisions that are made under this asbestos policy?
- 36 8.4 p.G-1 Item #1(b) Will this economic policy for asbestos removal be fully implemented, and if so, when will this economic analysis be completed? Is this economic analysis a part of the asbestos abatement plan?

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- 37 | p.G-2 Item #6 Does this policy apply to the buried steam lines? If so, when will these lines be removed?
- 8.5
- 38 | p.G-2 Item #7 This clause states that the course of action to be followed, with respect to asbestos at the closing installation, "will be analyzed in the Disposal and Reuse Environmental Impact Statement". The only thing this report says about asbestos is that "An asbestos abatement plan is due in April, 1991." Is that "analysis" adequate to fulfill the requirements of this clause in the "Air Force Policy - Management of Asbestos at Closing Bases"? The Village believes that the issue of asbestos in buildings proposed for reuse would have a major impact on the real value of those buildings. The Village believes that this EIS should reflect the ramifications of what is and isn't removed under the asbestos abatement plan.
- 8.3

CHANUTE AIR FORCE BASE SOCIOECONOMIC IMPACT ANALYSIS STUDY

**Review Comments by Michael R. Little, P.E.
Engineer for the Village of Rantoul, Illinois
March 27, 1991**

- 39 | p.S-3 The summary of impacts for each alternative provides an opportunity to paint an accurate picture of the economic effects of the base closure on the community. However, using phrases such as "long-term population gains" to describe a 25% reduction in base-related 1987 population under the best possible reuse scenario(the Proposed Action) is a disservice to the people affected. For the Non-Aviation Alternative this supposed "gain" is an 87% reduction from 1987 base-related population. These summaries, and the entire tone of the Socioeconomic Study should be revised to provide a document that truly reflects the enormous negative impact the community will suffer, so that this document can become the basis for justifying increased levels of economic adjustment assistance from the Federal Government.
- 40 | 7.4 p.3-14 3.3.6 Third from Last Statement - Adverse effects will occur at the WWTP prior to closure, and must be mitigated under all levels of reuse.
- 41 | 7.5 p.3-14 3.3.6 Last Statement - The Village of Rantoul will not assume responsibility for the steam plant, as stipulated in the Village's Position Statement.
- 42 | 7.3 p.3-15 Table 3.4-1 Under "Utilities", the Village Landfill will close in 1995, if current levels are maintained. The latest possible closure date, under IEPA regulations is 1998.
- 5 | p.3-34 3.4.3.1 The Village of Rantoul operates numerous independent utility departments. The simplistic, linear decrease in staffing levels presented under "Future Baseline" ignores the fact that the size of the utility systems for which these departments are responsible decreases imperceptibly with declining population. For example, the street department can't close streets just because half the people who live on them have moved. The same is true for water lines, sewer lines, electric distribution and all treatment facilities. Minimum, safe operational staffing levels are dictated by regulatory agencies, not population.

March 27, 1991

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March 27, 1991

1 of 3

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- 43 | 7.4 p.3-57 3.4.4 Future Baseline - The discussion regarding the economic impact on the wastewater operations head, which begins in the last paragraph on page 3-57 and continues on 3-59, contains several errors. First of all, this Study assumes that the Village will assume responsibility for the on-base collection system. The minimum cost associated with this system is about \$150,000 per year, which is in addition to the current expenses. Second, the wastewater system currently has only 3,300 customers, not 5,000, which is the number of electric meters in the Village. It is estimated that this number would drop to about 2,100 given the baseline conditions. This equates to current rates of about \$135 per year (\$445,000 from 3,300 customers), and future rates of about \$495 per year (\$890,000 + \$150,000 from 2,100 customers).
- 5 | 7.4 p.4-15 4.1.3.4 Fire Protection The anticipated changes in fire protection needs have been addressed by Fire Department personnel. This assessment is being submitted by Chief Inspector Dan Cullin and should be incorporated in this Study.
- 5 | 7.4 p.4-16 4.1.4 What is the basis for the Village revenue projections? We have projected that assumption of all public services will result in additional costs in excess of \$750,000 per year. Also, won't most of the 1,700 acres referred to as taxable be included in an airport authority which will be for the most part tax exempt?
- 5 | 7.4 p.4-19 4.1.5.1 How can the roadway improvements to US136 and Township Road 1800 East, which are essential to the Proposed Action, not be included in this Study? This a cost necessary to allow the Proposed Action to occur.
- 44 | 7.4 p.4-29 4.1.6.2 Wastewater, paragraph 5. The wording of this paragraph must be changed from "could require some temporary modifications ... to will require modifications to the wastewater collection system on-base and the Regional Wastewater Treatment Plant. These modifications have been fully addressed in the written comments to the EIS. In addition increases in flows that may occur due to the Proposed Action, will not require reversal of these modifications.
- 45 | 7.3 p.4-31 4.1.6.3 Solid Waste The Rantoul Landfill will close in 1995, in accordance with the policy adopted by the Rantoul Village Board. No expansion is possible due to IEPA regulations.

- 46 | 7.4 p.4-56 4.2.6.2 Wastewater Treatment: The same comments made in 4.1.6.2 above apply to this section. Modifications are necessary.
- 47 | 7.4 p.4-76 4.3.6.2 Wastewater Treatment: The same comments made in 4.1.6.2 above apply to this section. Modifications are necessary.
- 5 | 7.4 p.5-1 5.1 Economic Activity - The last paragraph on page 5-1, which continues on to page 5-8 depicts the real impact of base closure on Rantoul. This information is summarized on page S-3, but without the emphasis it should have (see comment S-3 at the beginning of this discussion).

March 27, 1991

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March 27, 1991

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VILLAGE OF RANTOUL, ILLINOIS**ANALYSIS OF IMPACTS ON WASTEWATER SYSTEM
DUE TO
CLOSURE OF CHANUTE AFB****PURPOSE AND SCOPE**

The purpose of this report is to present detailed information in response to comments made in the Record of Decision on the Final Environmental Impact Statement for the Closure of Chanute Air Force Base, Illinois, dated March 26, 1990, concerning the impacts of that closure on the Village of Rantoul Regional Wastewater Treatment Facility. This report only addresses those impacts which have been identified to date, and only impacts to the treatment facility proper. It is assumed that all on-base system maintenance will continue to be performed, at a level comparable to the present, by an entity other than the Village of Rantoul.

INTRODUCTION

The closure of Chanute AFB will result in the loss of about 50% of the average daily flow to the Village of Rantoul regional wastewater treatment facility. This loss of flow will be of major impact on the following areas at the treatment plant: 1) three in-plant pumping facilities, 2) all clarifiers and packed tower reactors, 3) all pressure and gravity piping systems, 4) sludge handling facilities and 5) plant O&M staff. In addition this loss of flow will impact the wastewater collection system, both on and off base. The following discussions elaborate on the specifics of these effects, the impact they will have and the cost to mitigate the problems caused.

FACILITY BASIS OF DESIGN

The Rantoul regional wastewater treatment facility was originally designed to accommodate the following hydraulic loadings:

Average Daily Dry Weather Flow	4.33 MGD
Peak Daily Dry Weather Flow	8.65 MGD
Peak Wet Weather Flow	24.6 MGD

Assuming a 20% peak flow occurrence, based upon annual flow analyses, the average annual daily flow for the design study was 5.2 MGD.

Chanute AFB reserved the following capacities within this facility:

December 10, 1990

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To estimate the flows resulting from this scenario, it was necessary to retrieve information from the ¹Facilities Planning Report prepared as the basis of design for the regional treatment facility. In that report, an estimate of the theoretical wastewater production rate on-base was made. That estimate, 0.75 MGD, represents the flow contributed to the system by the activities of persons living and working on-base. Elimination of this flow will result in an average daily flow of 2.7 MGD, which represents approximately 62% of the design average daily dry weather flow and only 52% of the average annual daily flow.

It should also be noted that the flow reductions determined in these two scenarios do not include the loss in flow due to persons living off-base, but working on-base, who leave the area as a result of the closure. In summary, the net effect of either of these scenarios is a drastic reduction in the flows to the treatment facility, resulting in operating levels at or below 50% of the facility design flows.

EFFECTS ON WASTEWATER SYSTEMS

There are two major areas impacted by the flow reductions previously identified: 1) wastewater collection systems and 2) wastewater treatment facilities.

A. Wastewater Collection Systems**1. Rantoul Collection System**

The Village's wastewater collection system consists primarily of gravity sewers. There are three pumping stations located in the system, which serve relatively small areas and one large pumping station which serves all of the Village west of the Illinois Central railroad tracks. Although there will be some flow reduction throughout this collection system due to closure, it is anticipated that the reductions will be spread throughout the system and no area will be impacted to a degree that will cause operating or maintenance problems.

2. On-Base Collection System

The on-base collection system includes 24 pumping stations and approximately 139,000 feet of gravity sewers and force mains. Nearly all of the flow in this system is pumped at least once, and much of it twice or more, before reaching the treatment facility. As a part of the regionalization project that constructed the new treatment plant, a large on-base pump station, designated Building 557, and a 20-inch diameter force main were constructed to transport on-base flows from the site of the abandoned, mass on-base treatment plant to the new regional treatment plant. In addition, a

¹ Village of Rantoul, Illinois - Facilities Planning Report as amended August, 1980

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Average Daily Dry Weather Flow	2.4 MGD
Peak Daily Dry Weather Flow	4.81 MGD

These numbers represent approximately 55% of the overall plant treatment capacity.

OPERATING HISTORY

Calendar year 1989 was the first full year of operation for the regional facility. For that year, the annual average daily flow to the facility was 3.45 MGD and the annual average daily flow contribution from Chanute was 1.65 MGD. This represents a 48% flow contribution by Chanute. Prior to the completion of the regional treatment facility, flow estimates were made based upon flow data taken from the individual treatment plants in the Village and on Chanute. These estimates anticipated average annual total facility flows of 4.23 MGD and flows from Chanute of 2.13 MGD, or 50%.

It is apparent from this information that the total flows to the plant for the 1989 operating year were approximately 18% below the anticipated level overall, with Chanute's flow being almost 23% below. Although one year's operating data cannot be taken too literally as a representation of the norm, it should be noted that ongoing efforts to reduce extraneous flows within the collection systems, especially on-base, have resulted in flow reductions to the treatment facility. These flow losses are independent of any closure action, and will continue to impact the facility even if reuse occurs.

CLOSURE IMPACTS ON FLOWS

From the previous discussion of existing flows to the regional treatment facility, it is apparent that the closure of Chanute will have a major impact on flows in the future. Two initial scenarios appear obvious: 1) Chanute closes completely and terminates the contract for wastewater treatment by eliminating all flow from Chanute to the treatment plant, and 2) Chanute closes completely, but continues to contribute extraneous flow (infiltration and inflow) to the treatment plant.

1. Chanute Closure-Total Flow Elimination

From the flow data for the 1989 operating year, it is apparent that given this scenario, the average daily flow to the treatment plant be reduced from 3.45 MGD to 1.8 MGD. The resulting flow would represent only 41.5% of the facilities design average daily dry weather flow and only 35% of the design average annual daily flow.

2. Chanute Closure-No Extraneous Flow Elimination

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smaller pump station, designated Building 963, and 8-inch force main were constructed in the 900 area of the base to eliminate a treatment plant located there. The 963 station's force main also discharges to the 20-inch force main.

Either of the closure scenarios will have dramatic effects on the operation of this entire system. Even now, with the lower than expected flows experienced in 1989 and to the present, the treatment plant operating personnel have found it necessary to add an oxidizing agent to the flow from the 20-inch force main to mitigate the effects of septic conditions. Excessive levels of hydrogen sulfide gas released at the treatment plant present personnel hazards, odor complaints from area residents, and damage to facilities. These conditions are caused by the long detention times throughout the on-base collection system. As flows are reduced, these conditions will worsen resulting in treatability problems at the plant and maintenance problems within the system due to hydrogen sulfide attack.

In addition, the reduced flows result in improper operation of the 557 pump station. This station was equipped with flow matching pump control equipment. This equipment automatically adjusts the pump speed so that the output of the pumps matches in the flow rate into the pump station. The purpose of this design is to lessen the negative impacts at the treatment plant caused by large flow surges due to on-off type pump operation. This is particularly important in the case of pumping systems as large as those at 557. However, flows to the station are so low that they are below the pumping capacity at the slowest possible speed, resulting in on-off operation and long wetwell detention times. Any further reduction in flows will result in increased seepage in the wetwell and short-cycling of the pumps.

A. Wastewater Treatment Facilities**1. In-Plant Pumping Facilities**

Three in-plant pumping stations are in operation. With a 50% reduction in flow rate to these facilities two major problems will arise. The first problem is due to excessive cycling of the 30 to 125 horsepower motors driving these pumps. Excessive cycling will result in heat build-up in the motor and controls resulting in motor failure. The larger motors will not function properly and will need to be replaced with smaller pumps and motors sized for the reduced flow rates to be expected. The second problem involves the doubled detention time in each pump station's wet well. At reduced flow rates, these detention times will exceed EPA standards and will result in a deterioration of wastewater quality and potential hazardous conditions for the treatment facility.

2. Clarifiers and Packed Towers

The treatment plant consists of three stages of clarification and two stages of packed tower

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biological reactors. As the reduced flow rates it will be necessary to remove units from service to maintain proper loading rates on the remaining units. It is unknown how this can be accomplished to prevent long-term degradation of the structures and the equipment/media therein. At this point, it would appear that the cost to take these units out of service, in a manner that will not allow degradation, will be equal to the continued cost to operate and maintain them.

3. Pressure and Gravity Piping Systems

Reduced flow rates throughout the facility will result in additional maintenance problems associated with low flow velocities in all piping systems. It is uncertain at this time what the overall effect will be, but it is certain that pipe fouling and plugging problems will become more frequent when the flows are reduced.

4. Sludge Handling Facilities

The wastewater plant incorporates an anaerobic digester and raw sludge handling facilities with drying by belt filter presses. The reduced solids loading to the digester will either make it unserviceable, or too expensive to run due to reduced gas production. In either case, it will force all sludge handling to the raw sludge facilities. This will result in a higher cost per thousand gallons of sewage treated, since there will be no solids volume reduction through the digester.

5. Plant O&M Staff

The reduction in flows will not result in a proportionate reduction in personnel. The facility is already at minimum staffing levels acceptable to the Illinois EPA, and minimum numbers of operators to man a two-shift, seven-day-per-week operation. In addition, all stages of treatment will remain, although there may be some reduction in the number of units in operation in some stages. The current maintenance staff is marginally adequate for the present operation and could only be reduced minimally, if at all, in the event of the loss of Chanute's flows.

In summary, the loss of flow from Chanute will result in numerous operating problems, some requiring capital improvements to correct. It will also result in a 45 to 50% loss in revenue with almost no drop in O&M expenses.

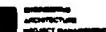
CORRECTIVE ACTIONS

The following are the recommended minimum corrective actions necessary to provide a properly functioning wastewater system, with an acceptable level of operating and maintenance expense following the closure of Chanute AFB.

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Sodemann and Associates, Inc.



A. Wastewater Collection System - On-Base

Install Permanent Chemical Feed System	\$47,500
Modify 557 & Package Station	\$31,000
Sub-Total	\$80,500

Estimated Annual Chemical Costs: (\$150 per day) \$55,000 per year

B. Wastewater Treatment Facilities

1. In-Plant Pumping Facilities

Remove 12-inch Pumps & Replace w/10-inch (2 pumps each at three locations)	\$224,000
Modify three Pump Control Systems	\$18,000

Sub-Total \$242,000

2. Sludge Handling Facilities

Downsize, Clean and Moltball Digester	\$69,000
Sub-Total	\$69,000

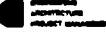
TOTAL ESTIMATED CONSTRUCTION COST \$391,400

ESTIMATED ANNUAL CHEMICAL COST \$55,000

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Sodemann and Associates, Inc.



A. Wastewater Collection System - On-Base

To prevent future treatability problems due to excessive transport times within the on-base system, a permanent, flow proportional hydrogen peroxide feed system should be installed at the 557 pump station to increase the dissolved oxygen content of the wastewater and prevent septic conditions.

To prevent permanent damage to the 557 pump station, modifications should be made to divert all flow rates below the maximum capacity of the 557 pumps to the existing packaged pump station adjacent to 557. This pump station should be modified to provide larger pumps and motors to increase its capacity, and a new control system.

B. Wastewater Treatment Facilities

1. In-Plant Pumping Facilities

To reduce the pumping capacity of the three in-plant stations to better match the reduced flow rates, it will be necessary to replace six 12-inch pumps, two in each station, with 10-inch units of lesser capacity. It will then be necessary to modify the pump control systems to operate three of the four pumps in a staged sequence to provide peak daily flow rates.

2. Clarifiers and Packed Towers

No actual modifications will be made to the towers that must be taken out of service. Some operational/maintenance costs may be incurred to isolate these units and mothball them.

3. Pressure and Gravity Piping Systems

There does not appear to be any economically feasible way to modify the piping systems to prevent problems associated with low flows. Increased operation and maintenance functions will be necessary to prevent plugging and fouling problems.

4. Sludge Handling Facilities

To take the digester out of service for an extended period will require that it be completely dewatered, cleaned, and mothballed.

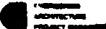
ESTIMATED MODIFICATION COSTS

The following are the estimated costs to accomplish the corrective actions identified in the previous section. These costs assume that work will take place in 1992.

December 10, 1990

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Sodemann and Associates, Inc.



LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1707

CHICAGO OFFICE • ROOM 6-308 • 100 WEST RANDOLPH 60601

BRENT MANNING, DIRECTOR

April 22, 1991

Lt. Col. Tom Bartol
Director of Programs and Environmental
AFRCE - SMS/DEP
Norton AFB, California 92409-6448

Dear Lt. Col. Bartol:

The Department per your March 1, 1991 request, has completed its review of the March, 1991 draft EIS - Disposal and Reuse of Chanute Air Force Base, Illinois.

The Department supports the proposed action which is the disposal of Chanute AFB for reuse as a major aircraft maintenance facility. It is our understanding the base recreational facilities are desired by Rantoul, and if granted to them by the Air Force, will be an excellent addition to the village's recreational system.

Section 4.4.5 discusses the project - related effects on biological resources, the sensitivity of these resources and ways that sensitive resources can be protected and/or mitigated for when necessary. Such protection measures include field surveys, such as IDOT will conduct along proposed construction corridors during the summer of 1991 to determine if native grasses are present, avoiding construction in the southeastern portion of the base where wetlands are present and providing appropriate mitigation recommendations to minimize and/or compensate for impacted resources.

Based on our review the Department believes the potential environmental consequences of the disposal and reasonable reuse alternatives have been adequately discussed and analyzed in this DEIS.

Thank you for the opportunity to comment.

Sincerely,

Brent Manning
Director
BRENT MANNING

BM:RWL:ts

March 27, 1991

Lt. Col. Thomas J. Bartol
U.S. Air Force

Col. Bartol:

I am Jack Miller, Chairman of the Health Services Committee assisting in the Village of Rantoul reuse efforts.

I was pleased to see that your team found the extra 90,000 square feet in the Chanute hospital that the 1988 Base closure commission lost.

I am here representing the military retiree community, including dependents. There are around 5,000 of such individuals currently being taken care of in a superb manner by the Chanute hospital.

Unfortunately many of these people have illnesses which require costly medication and their health precludes frequent trips to Scott AFB or Wright-Patterson AFB hospitals. You have noted in the Socioeconomic Analysis the limitations Veteran Administration hospitals have which mean that many people do not have access to the Danville VA hospital.

We are well aware, also, of the CHAMPUS plan. Many of those currently being taken care of at Chanute are MEDICARE eligible. In any case, whether CHAMPUS or MEDICARE, they are not financially able to afford secondary coverage.

1 15.2 I know the services are not required to take military hospitals to the patient but once again we ask that some consideration be given to those in ill health who specifically moved to this area so they could afford to remain in as good health as possible for as long as possible. Outpatient and pharmaceutical services would go a long way in filling this void.

 U.S. Environmental Protection Agency P.O. Box 1616 Washington, D.C. 20460

217/782-0610

Rantoul - Chanute Air Force Base - Draft Environmental Impact Statement

April 15, 1991

Lt. Col. Thomas J. Bartol
Director of Programs and Environmental Division
AFRCE - BMS/DEV
Norton Air Force Base, California 92409-6448

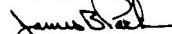
Dear Col. Bartol:

We have reviewed the Draft Environmental Impact Statement dated March 1991 for the disposal and reuse of Chanute Air Force Base in Rantoul, Illinois. Regarding the impacts on the Rantoul sanitary sewer system and wastewater treatment plant, we have the following comments.

- 7.4 1. Because of the long detention time that will result in the base sewer system, a hydrogen peroxide feed system or some other means of controlling septic conditions must be installed at the base pumping station.
2. In order to properly handle the reduced flows at the wastewater treatment plant, the six 12 inch pumps must be replaced with smaller pumps.
3. The digester at the wastewater treatment plant will have to be taken out of service and some other acceptable means of sludge handling and disposal will have to be provided.

If you have any questions or comments regarding the above comments, please contact Charles Fellman of the Permit Section.

Sincerely,



James B. Park
Manager
Division of Water Pollution Control

JBP:CF:ct,981q,100

cc: Records Unit
FOS - Champaign
John Reel, Rantoul
Sodeman & Associates



March 27, 1991

Katy B. Podagrosi
Mayor

Lt. Col. Thomas J. Bartol
Director of Programs and Environmental Division
AFRCE - BMS/DEV
Norton AFB, CA 92409-6448

Gentlemen:

We of the Village of Rantoul have thoroughly read the Draft Environmental Impact Statement and we are entering into the record nine papers on specific concerns. We are also in receipt of the recently completed Socio-Economic Impact Analysis, and since the impact analysis of the EIS depends substantially on that supporting document, our positions are based on both the EIS and Socio-Economic reports.

In general, we are disappointed that issues of greatest concern to many citizens in Rantoul remain unaddressed.

1 1.2 *The documents rely heavily on the best-case scenario of the acquisition of a major user such as United Airlines, and slum over the short term (1992-1996) lean years with no or minimal re-use.

2 2.2 Most of all, we believe these documents are overly ambitious relative to expected growth. We remind you that after two years of concerted effort on the part of many people, not one company has committed to date to settle at Chanute. The 3 impact on the infrastructure of the base and local community under minimal use conditions is hardly addressed. We ask that the document be amended to include an additional column as on Page S-3, Table S-1 to reflect conditions under the no-action alternative with a base line of December 29, 1988, through the year 1998.

One document that I am entering into the record this evening is the Chanute Technical Training Center Economic Resource Impact Statement of 1988, published the year of closure announcement.

This document indicates that the economic impact of the operation of Chanute on this area is almost \$136 Million annually. This \$136 Million is only Chanute

expenditures - the accepted income multiplier reflects a total economic impact of \$341 Million cash flow dollars on the Village of Rantoul and surrounding area.

The impact of the jobs is listed at 14,203. Of the 991 civil service jobs at Chanute, 493 - or about half - live in Rantoul. Of the 6,000 military (at that time) over 4500 or 75 percent live in Rantoul. Even if we drop down to only a 50 percent rate on the Rantoul community, the Air Force is indicating in this report that we are losing \$68,000,000 annually from our economy.

Using the same multiplier as above, the impact on the Rantoul community is \$170 Million each year.

4 15.1 The Chanute Economic Resource Impact Statement was clearly written to impress upon the civilian world the importance of the military installation to the local economy. Certain formulae were used to reach conclusions in this document. We are requesting that the Air Force use the same formulae to express the economic loss to the community by closing of the base.

5 11 Electing to adopt the base line of the date of closure to develop the draft environmental impact statement, clearly the Air Force can make a case that there will be very little, if any, negative impact on the local community. Just as clearly, this is a case of using facts and statistics to develop a preferred analysis.

The Village of Rantoul protests this methodology since neither the closure nor reuse reports address adequately the short term environmental and socio/economic NO or MINIMAL impact conditions.

There is no doubt but that the employment rate in Rantoul will take a definite nose dive with the closure of Chanute AFB in September 1993. There should also be no doubt but that the Village Government and many others here are diligently striving to ensure that unemployment does not reach rock bottom and whatever rate is reached it will be only for minimum time.

6 4.2 We take exception to the comments on Page 2-1, Section 2-1, para. three of the Socioeconomic Impact Analysis which lists several of Champaign-Urbana's largest employers as Rantoul's. We should be so fortunate as to have Carle Hospital, Kraft, Inc., J.M. Jones and Colwell Systems along with the industrial employers we do have. Inclusion of these companies in this report inflates the employment statistics for Rantoul to the point of being misleading.

7 7.3 *Assumptions are made that Rantoul's landfill will be available for base closure debris. We are requesting that the name of the Rantoul Landfill be deleted from the lists of landfills available to receive closure material. (see attachment)

Disposal of solid waste generated by base closure activities between now and October 1993 is a concern. Due to the fill rate of the Rantoul landfill experienced

- 7 during the past few years, and the rapidly approaching closure date for this facility, restrictions have been imposed on the types of solid waste received. Material from demolished buildings, for example, is no longer accepted from any source.
- 7.3 It appears that EPA restrictions will preclude any expansion of the landfill so we are doing everything possible to extend the life of the current facility. Currently, additional restrictions are being drafted which, among other things, will limit the increase the haulers may experience in any month, and require additional trash segregation and reclamation efforts.

The bottom line is this, the Rantoul landfill will not be able to receive the increase of solid waste generated by crating, packing and disposal of materials being excessed by the transfer of Chanute activities to other bases.

- 8 These documents continue to skirt the issue of problems associated with the Wastewater Treatment Plant in the event of no or minimal reuse. We remind the Air Force that Rantoul did not need the additional capacity in its plant for the local community. The additional capacity was built to accommodate Chanute. We respectfully refer to the contract between The Village of Rantoul and Chanute Air Force Base in which the Air Force agrees to pay the minimum charge for flow into the plant.

- 9 3.1 *The draft EIS does not indicate that the Air Force will demolish and clean up certain buildings that must be removed prior to closure and re-use. These include at least the following: all structures associated with the old wastewater treatment plant, Building #732, #125, and #107. see attachment)

We cite for the record the following reports prepared by consultants hired by the Village of Rantoul, approved by associated Chanute Re-Use committees as well as by the Rantoul Plan Commission and by the Rantoul Village Board of Trustees. These are:

- *The Urban Land Institute Report
- *The EDAW Report
- *The Crawford Murphy Tilly Report for Aviation
- *The Economic Research Associates Museum Study

In addition to my comments this evening, and comments by Mike Little, Consulting Engineer from Sodemann Associates Engineers for the Village of Rantoul, are attached, for the record, papers prepared at the Village's request, from the following:

*Rantoul Village Board of Trustees: a resolution of intent regarding Chanute ReUse.

*Kent Tucker, Community Development Director, who will call special attention to our specific concerns on socio-Economic issues

*Police Chief Allen Jones, who will address further concerns relative to security during the short-term re-use period.

*Ken Modglin, Rantoul Village Comptroller, has prepared a paper to address our concerns as to the impact that closure will have on Village finances. This is an issue largely overlooked in both the EIS report and the Socio-Economic report.

*Rich Thomas, Recreation Director, will address recreation issues - which for the most part are addressed in line with Rantoul's concerns.

*Dan Culkun, Village Inspector, addresses the issue of drainage and short-term cost of fire-fighting.

- 10 2.1 *Ray Boudreux, Base Re-Use Manager, who addresses some alternate uses being considered by members of three re-use committees. These issues have neither been considered nor approved/disapproved by the Village Board since it is early in the planning process for these. However, we ask that they be studied as alternate uses to preclude the need for an additional EIS at a later date.

The Village definitely concurs with the attachment (H) from Steve Combest of C & S Sanitary, re a site for a transfer station.

- 11 15.2 In addition, we have asked Bob Kidd to speak to concerns of the business community as it relates to the EIS and Socio-Economic reports. Jack Miller to speak again for retirees. We are distressed that neither report speaks to the over-riding issue of health care for retirees.

These individuals work closely with the Village of Rantoul government, and we concur fully with their concerns.

In conclusion, I refer to the report on the disposal and reuse of Chapman Courts and request that the Rantoul Landfill be deleted from the list of available landfills contained therein. I would further like to express appreciation to the Air Force for the expeditious study of the Chapman Court situation and to further thank Maj. Gen. Day for his cooperation in attempting to bring this problem to a satisfactory conclusion to the base and the community.

- 12 2.5 Gen. Day's action is indicative of those that we ask the Air Force to continue taking to help alleviate hardship on the local community. Specifically we are asking that the Air Force delineate for us specifically what the caretaker status will involve. 13 3.6 we ask for minimum hassle over those items that should be, and historically have been, conveyed under terms of public benefit, and we ask that reasonable prices be expected for those properties and facilities presented for sale under private use provisions.

(end)

ATTACHMENTS:

- A Resolution of intent re Base Closure. Rantoul Village Board
- B Kent Tucker, Rantoul Community Development Director, comments and questions re the Environmental Impactment and Socio/Economic Impact Analyses
- C. Allen Jones, Chief of Police, Rantoul, questions regarding the Environmental Impact and Socio/Economic Analyses
- D. Ken Modglin, Comptroller, Village of Rantoul, comments and questions re financial assumptions and conclusions re Environmental and Socio/Economic Analyses
- E Rich Thomas, Recreation Director, Village of Rantoul, comments re recreation facilities. Chanute, re Environmental and Socio/Impact Statements
- F Dan Culkun, Chief Inspector, Fire Inspector, Village of Rantoul, concerns re conclusions re fire protection and drainage re Environmental and Socio/Economic Impact statements
- G Ray Boudreux, Base Conversion Manager, Rantoul, report from Committees developing proposals to be considered in environmental study process
- H C & S Sanitary, proposal to locate transfer station on Chanute property, to be studied re EIS
- I Letter delineating buildings the Village of Rantoul requests be demolished
- J Chanute Technical Training Center Economic Resource Impact Statement FY88

RESOLUTION NO. 3-91-374

A RESOLUTION
APPROVING A POSITION STATEMENT

Attachment A

BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF RANTOUL, CHAMPAIGN COUNTY, ILLINOIS, as follows:

1. That a VILLAGE OF RANTOUL POSITION STATEMENT, CHANUTE REUSE, INFRASTRUCTURE TRANSFER & RESPONSIBILITY (the "Position Statement"), a copy of which said Position Statement is attached hereto and hereby incorporated by reference, be and the same is hereby adopted and approved as the position of the President and Board of Trustees of the Village of Rantoul, Champaign County, Illinois (the "Village") with respect to the matters contained therein.
2. That, from and after the adoption of this Resolution, the President of the Board of Trustees of the Village and such other officers, agents and employees of the Village, including its Engineers and Attorney, are hereby authorized, empowered and directed to do all such acts and things and to execute all such documents and instruments as may be necessary to carry out the intent and accomplish the purposes of this Resolution and to comply with and make effective the provisions contained in the Position Statement.

PASSED and APPROVED this 12th day of March, 1991.

John S. Pyleman
President

ATTEST:

Donald C. Fife
Village Clerk

**VILLAGE OF RANTOUL POSITION STATEMENT
CHANUTE REUSE
INFRASTRUCTURE TRANSFER & RESPONSIBILITY**

General Position Re: Utilities and Streets

The Village of Rantoul is willing to accept responsibility for the appropriate public portions of the streets, water, sanitary sewer, storm sewer and electric systems provided:

- 1 The Air Force conveys to the Village the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village.
- 2 The Air Force will cooperate with the Village in the public benefit transfers that the Village deems appropriate for the overall good of the community, and as recommended under the EDAW, ULI and CMT studies, and
- 3 The Air Force will participate in the support of the systems as detailed in the following individual descriptions.

Water, Storm Sewer, Sanitary Sewer and Electric Systems

The Air Force agrees to support the operation of each of these systems by paying a user fee for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force properties. This fee will be based upon the Village's estimated annual operation and maintenance cost for the on-base system, with a credit based upon the level of reuse that occurs. In the case of the wastewater system, the user fee will be determined in accordance with the conditions of the contract between the Village and Air Force.

Steam System

The Village is not prepared to accept responsibility for any portion of the steam plant or the steam distribution system. The Air Force should provide a caretaker operation for the complete steam system.

MARCH 12, 1991

MARCH 12, 1991



RANTOUL

AN ILLINOIS
CERTIFIED CITY

RE: RANTOUL AND CHANUTE AIR FORCE BASE
INFRASTRUCTURE TRANSFER & RESPONSIBILITY STATEMENT
AND THE RETURN OF THE CHANUTE AREA TO THE BASE, CHANNEL
TOWARD THE AIR FORCE BASE - A BASE DEPARTURE ANALYSIS STUDY

ATTACHMENT B
RE: RANTOUL AND CHANUTE AIR FORCE BASE - A BASE DEPARTURE ANALYSIS STUDY
AND THE RETURN OF THE CHANUTE AREA TO THE BASE, CHANNEL TOWARD THE AIR FORCE BASE - A BASE DEPARTURE ANALYSIS STUDY

DRAFT EIS

PAGE SECTION COMMENT/QUESTION

1	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
2	3.2	Can it be assumed that the facility will be used for the military purposes for which it was designed? The facility can be used for commercial and light industrial use, but not residential.
3	1.2	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?

for 5 years following the date of closure, or as long as necessary to ensure the marketability of the Air Force's buildings, to allow time for the conversion of all buildings to individual HVAC systems. The Air Force shall maintain responsibility for the steam plant and distribution system, and shall properly dispose of the facilities when no longer needed.

If the Air Force chooses to sell the water, sanitary, or storm system to a third party, the Village will consider that organization a franchisee of the Village. No water or sewage treatment facilities, not owned by the Village, will be allowed to operate within the Village limits. The Village assumes that they will become the owner and operator of the public portions of the electric system.

Other Considerations

- 1 Civil Engineers Office, computer system and records - The Village is requesting Bldg. 58 (former base C.E. office), including all records, drawings, reports, etc. Also included is the WIMS system, including any proprietary computer hardware and software.
- 2 Fire Station and Equipment - The Village is requesting Bldg. 43 and all equipment.

**Position Statement
Rantoul Municipal Landfill**

The Village of Rantoul's closure/post-closure plan under the Village's Illinois EPA permit to operate the Rantoul Municipal Landfill stipulates that the landfill will close April 1, 1995. This plan assumes no material increase in the amount or quantity of solid waste delivered to such landfill between the present time and such date. The President and Board of Trustees of the Village of Rantoul will adopt appropriate legislation consistent with such IEPA permit to restrict the quantity or amount of solid waste delivered to the Rantoul Landfill.

PAGE SECTION

4	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
7.3	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
5	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
3.3		What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
6	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
4.2		What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
7	1.4	What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
5.3		What is the assumption that the Air Force will convey the necessary components, including requested equipment, of the systems, together with all necessary easements and/or rights-of-way deemed appropriate by the Village?
8	3-82 1.4-5.4	What wetland restrictions apply to this EIS?
9	3-82 1.4-6 and 1.4-6.1	As the Rantoul Community Development Director, I request one copy each of the determination of eligibility for historical and prehistoric resources on base, in the assessment of the effects of the project on cultural resources and in the archeological surface survey of the base.
14.1		What is the land use pattern in the strip immediately adjacent to the residential area in the northeast corner of the base?
10	4-11 map	What is the land use pattern in the strip immediately adjacent to the residential area in the northeast corner of the base?
5.1		What is the official adopted Village of Rantoul policy that Rantoul does not want the steam plant?
11	4-11 4.2.4	What is the basis for the assumption that all existing infrastructure has been identified?
7.5		
12	4-50 4.1	
8.10		

PAGE	SECTION	COMMENT
13	4-52 4.3.1	There needs to be a clarification as to whether "new generators" of hazardous wastes includes entities leasing base property for interim use.
8.8		
14	4-55 4-56 4.3.1	If asbestos and/or radon statutes or regulations are adopted or approved before closure, they should be applicable to the base disposal. Will this be the case?
8.2		
15	5-1 asbestos	The Village of Rantoul requests a copy of the procedures for appealing determinations by the Bioenvironmental Engineer.
8.7		

SOCIOECONOMIC IMPACT ANALYSIS STUDY

PAGE	SECTION	COMMENT
16	S-2	It is not realistic to assume, given limited human and other resources that all three components in the proposed action (aircraft maintenance facility, education and medical facilities) will be accomplished simultaneously. Consequently, full recovery by and of Rantoul may not be as assumed.
2.2		
17	2-1 2.1	As in the EIS, there are some companies here which are not located in Rantoul.
4.2		
18	2-5 2.2.2	Our 1985 Special Census population was 20,641 and, in 1990, 17,212. If the military personnel, dependents and retirees were 14,691 in FY 1987 (October, 1986-September, 1987) and 8978 in FY 1990 (October, 1989-September, 1990), what explains the declines of at the most 3429 in total population but 5713 in military/military-related persons? The retirees will have some attrition through deaths, but should be somewhat stable. The military and dependents have declined. We see no evidence of an in-migration of 2300 persons to make up the difference. There is no evidence that the population density has changed significantly. The vacancy rate was 8.1% in 1985 and 9.9% in 1990. What Air Force data was used?
4.1		

3

PAGE	SECTION	COMMENT
9	3-9 3.3.2	It cannot be assumed that in-migrants are going to exhibit characteristics like persons in other areas of Illinois. New in-migrants could be poorer persons responding to cheaper housing and create the need for more government subsidies. New in-migrants could have other characteristics different from other parts of Illinois as well.
7.3	19 3-14 3.3.6	The landfill is now going to close at an earlier than that noted in this document and the EIS. The general character of persons activities as they relate to utilities MAX change if more older persons are left in Rantoul in greater proportions than they are now. We will be losing a disproportionate number of younger persons.
20		Rantoul does not want the steam plant.
7.7		
7.5	21 3-16 3.4	Positive impacts in the long run do not hold a community together in the short run.
12	3-32 Table 3.4-14	There is a typographical error for 1987 population=4,032,15 is wrong.
	3-34 3.4.3.1	Staffing is not necessarily a function of personnel per capita. Geographic area of infrastructure, number of structures and size patrol areas also influence staffing levels. It cannot be assumed that we are going to roll up half the town, move the people and serve a smaller area.
23	4.3 3-50 map	It cannot be assumed that unemployed people will stay in the area waiting to be rehired. Broadlands and Villa Grove FD is not located in the area indicated.
6.1	24 3-80 3.4.5.3	The shortline railroad has not been entirely abandoned.
	3-84 3.4.6.1	What is the cost of metering buildings and facilities not currently metered?
	3-15 4.1.3.4	There must be an estimate of a paid-staff alternative for fire protection.

4

Rantoul Police Department



109 East Grove
 Rantoul, Illinois 61866
 ALLEN L JONES Chief of Police Phone (217) 893-0988



March 26, 1991

Attachment C

Kathy B. Podagrass
 Mayor
 Village of Rantoul
 333 S. Tanner
 Rantoul, IL 61866

Dear Mayor:

I have reviewed the Draft of the Environmental Impact Statement and the Socioeconomic Impact Analysis Study as they relate to law enforcement.

I would question four (4) areas of the Socioeconomic Impact Study as printed:

- 8.1. On Page 3-46 the top of the page states that "...the 125-cell Champaign County Correctional Center in Urbana serves all police departments in the county, including the 3345th Security Police Squadron at Chanute AFB. The Champaign County Jail does not have 125 cells nor does it hold any prisoners for the Air Force. People arrested on Chanute AFB are transported to the Federal Detention Center in Danville.
- 8.2. On Page 3-46, the second paragraph concerning the Security Police Squadron states that the Champaign County Sheriff's Office maintains a proprietary jurisdiction with the Chanute Security Police in "Ash Housing". Ash Housing is located on Chanute AFB and the Sheriff's Department does not patrol nor hold any jurisdiction on that property.
- 8.3. On Page 3-48 under the Section entitled Future Baseline, it states that "under the Future Baseline, with Chanute AFB in caretaker status, there would be no requirement for base-related police protection from the local community. Therefore, the current level could be maintained with 9 sworn officers for 1994 and beyond." This assumption that the police are based solely upon population is not true. The Police Department will still have the same amount of territory to patrol as before closure. Just because the population is projected to go down does not automatically assure that they will be taking buildings and streets with them.

I request a response to these comments and questions as soon as possible.

Sincerely,
Karen Tucker
 Karen Tucker
 Community Development Director

5

In addition, no where in either study does it mention the fact that the Rantoul Police Department is also responsible for the Emergency Ambulance service for the entire northern half of Champaign County. To do away with over half of the Police Department would have a severe impact on not only the quality of life as we know it, but also with the safety of those civilians who remain in the community.

On Page 3-50 the map which displays the Fire District Boundaries (Figure 3-4-2) shows that the Broadlands and Villa Grove Fire District is located adjacent to the southwest corner of the Thomasboro Fire Protection District. The Broadlands and Villa Grove Fire District is not even located in Champaign County. They are in Douglas County and on the map should be located south of the Philo Fire Protection District.

Please contact me if you should need further information concerning this material.

Respectfully,

Allen L. Jones
Allen L. Jones
Chief of Police
ALJtsq



RANTOUL
AN ILLINOIS
CERTIFIED CITY

ATTACHMENT D

KEN MOOGLIN
VILLAGE OF RANTOUL COMPTROLLER

Specific responses related to Chapter 3, Evaluation of socioeconomic resources, and affected financial data derived from those resources and incorporated into the Socioeconomic Impact Analysis Study for Chanute Air Force Base.

3.3 Methods: 3.3.1 Economic activity

An independently derived version of Regional Input-Output Modeling System (RIMSII) is the method for projecting local area jobs, earnings, and sales within the Proposed Action and the Aviation alternatives. This given creates projections that are not included in the document for our study.

3.3.4 - Revenues projected based on tax base change or Revenues estimated based on a per-capita basis

As stated the revenue impacts are estimated in two categories of tax and non-tax revenue. Tax revenues are estimated based on tax base e.g. taxable retail sales and assessed values. Non-Tax revenues are based on per-capita projections also derived from the RIMSII model. The RIMSII model projections can be substantially influenced depending on the structure of the model.

3.3.6 - Utilities

Major assumptions listed in analyzing the potential effects on utilities anticipates the Village will assume the responsibility of all utilities except the natural gas system and possibly the steam plants. Again Utility demands can be substantially influenced depending on the results of the model.

3.4 - Affected environment (baseline) -

Population changes and housing demand would also be influenced by projection methods used in the model. Table 3.4-1 - Shortfall -

Attachment E - Page 1

referring shortfall numbers as a direct result of the assumptions used in resources in the RIMSII model. These methods need further investigation as to their relevance and need for alternative methods that can track multiple situations within the region of study.

3.4.3 - Public services

Levels of public service are determined by ratio of employees to population. This method of determining levels of public service produces projections that appear on the surface to be incorrect. The ratios used to produce these projections appear incorrect and points out the fact that the Village of Rantoul population figures from historical data includes CAFB which is within the Village limits. Determining future baseline service levels for the Village of Rantoul is unique and a more appropriate method is needed to produce more accurate projections. A standard ratio of employees (15.5 employees per 1,000 population) to population may not be an appropriate standard for all municipal services. Police protection is far different than code enforcement as to the level of service that is required within a range of changing population.

Table 3.4-15 - Local government employment arising from closure

The table illustrates numbers produced from the ratio of employees to population and on the surface seems incorrect.

3.4.3.3 - Police protection - future baseline

This paragraph is a good example of the comment in 3.4.3. A reduction in population will not necessarily produce a proportionate reduction in the police officers required to provide the level of service required.

3.4.4 - Public Finances Village of Rantoul

Chapter three of the study produces the basis for many of the relevant factors that determine the shortfall numbers in the study. If projection methods produce inaccurate revenue and expenditure projections, the shortfall is inaccurate also.

A general comment:

There are inconsistencies in this study that stand out. Trying to substantiate a number that stands out leads back to Chapter 3. Chapter 3 appears to be the basis for many of the methods, models, ratios, formulas, and assumptions that were used to produce numbers that draw conclusions in the study. Many areas of public service with different constituents are represented throughout this study. It would seem appropriate that further review be done to validate the integrity of the methods used for evaluation and characterization of socioeconomic resources or appropriate methods be incorporated into the study to insure the projections derived from the study are accurate.

Attachment D - Page 2



BOARD MEMBERS
Ray E. Drysdale
Marvin Bruner
Eddie Carter
Ron Hause
Anne Hill

DIRECTOR
Richard L. Thomas

(attachment E)

Lt. Col. Thomas J. Bartol
Director of Programs and Environmental Division
AFRCE-BMS/DEV
Norton Air Force Base, California 92404-6448

COMMENTS ON CHANUTE AIR FORCE BASE ENVIRONMENTAL IMPACT STATEMENT

The economic impact to the parks and recreation system in Rantoul are underestimated, especially in the Non-Aviation and Minor Air Craft Maintenance Alternatives. Obviously the ability of the Village to assume the present recreation facilities of the base would be greatly influenced by the population of Rantoul. Due to the fact our department is subsidized beyond the present recreation tax, any action that would affect Village revenue (i.e. sales tax, assessed evaluation, M.F.T., etc.) will directly affect our budget.

Specific references to park and recreation systems in the Draft EIS are reasonably accurate. The purpose of our present and future park and recreation system is stated accurately. There is a fluctuation in the acreage referred to as open space throughout the document but the total is usually close to the actual figure. One point worth mentioning is that the document continuously refers to the need for buffer zones around both commercial and residential areas. (i.e. the southwest corner of the base). The buffer zones are very important open spaces needed to maintain the integrity of our park system. Wildlife population, habitat, and wetland impact are properly described and should not be affected by any of the alternatives for reuse. I am also glad to see that the major parks and recreation facilities and open space on the base are continuously referred to as future public areas.

The facts and figures used in the socioeconomic impact analysis seem consistent with those throughout this process. The parks/recreation impact specifically is not discussed to a very great degree. It is our assumption that the renovation of existing facilities mentioned in section 1.4... (pg. 1-1) for \$2 million has something to do with the air museum project. The main capital expenditures necessary in assuming the facilities on base would be the heating system at the Forum, moving the tee and green of hole #4 on Willow Pond Golf Course, and the purchase of equipment for use in the forum and youth center.

Richard L. Thomas
Director

Affiliated with National Recreation and Park Association
Illinois Park & Recreation Society



ATTACHMENT F

March 25, 1991

Lt. Col. Thomas J. Bartol
Director of Programs and Environmental
Division, AFCEC - BMS/DEV
Norton AFB, California 92409-6448
(714) 382-4891

Lt. Col. Bartol:

I would like to point out two items that concern the Village of Rantoul with the proposed Draft of the Environmental Impact Statement Disposal and Reuse of Chanute Air Force Base of Rantoul, Illinois.

- 1 The first item is on page 3-9, Section 3.2.3.1 dealing with off-base land use. It states that the off-base land at the north end of the north-south runway includes two mobile home parks that are separated by vacant land. The area is flat and drains to the southeast onto the base. This statement is false. The Village of Rantoul Storm Committee has looked at this problem for the past three years. The area drains to the east, northeast, where the water enters the Village of Rantoul Storm Drainage System, which discharges to a drainage ditch near the Village Waste Water Treatment Plant.
- 5.2 2 The second item deals with the Village of Rantoul Fire Department. According to the Chanute Air Force Base Socioeconomic Impact Analysis Study, which states in Sections 4.1.3.4 and 4.2.3.4 on Fire Protection, that the base squadron has assisted the Rantoul Fire Department only once in the last ten years. This is a false statement. On several occasions each year the base squadron has been helpful in assisting the Rantoul Dept. in fire and reserve situations. I would like to point out that Rantoul is a paid per call fire department, which stresses fire training and life safety techniques. Rantoul requires all their firemen to have a certified firefighter 2 status from the State of Illinois. Most Rantoul firefighters go on to obtain firefighter 3 status with specialized training in certain areas of fire service training. If the Village were to take responsibility for fire protection at Chanute Air Force Base, either in a caretaker status or one of the three
- 3

proposed uses, Rantoul would suffer a burden of expense due to the need to hire additional firemen and to outfit the needed personnel. There was no cost associated with this impact on the Village. The current Fire Department concurs with John Funke, former Rantoul Fire Chief, in his statement to the Public Works Committee dated January 10, 1990, a copy of which is attached.

It should be noted that as time passes, costs quoted in that statement will increase.

Daniel E. Culkin
Chief Inspector

ATTACHMENT G

CLOSURE EIS CONCERN/COMMENTSFINAL PUBLIC HEARING
April 27, 1991
Rantoul, IllinoisClosure Baseline:

- 1 The baseline selected by the commission paints a very rosy picture through the year 2014. What is left out of the picture is the condition of the economy from the closure date of October 1, 1993 through the year 2014. In the no-action alternative, the adverse affect of the base with boarded-up buildings and a lock on the gate is not considered. The economic environment would be disastrous and the marketing potential dramatically reduced. It is recommend that another column be added to the charts depicting the possible alternatives for redevelopment to address this factor.
- 2 Table 2.6-2 should be modified to add the column Redevelopment Period, 1993-2014 and additional study should be conducted to analyze the environmental impacts of a period of redevelopment without any of the stated alternatives taking place. Simply stating that "no action" results in "no impacts" is not only misleading but is totally untrue.

Golf Course:

- 3 Status of the golf course is not considered under the no-action alternative on page 2-25. It is essential that minimum maintenance be provided even if "no action" should become the reality in order to guarantee future sales potential of this improved property.

900 Area Redevelopment:

- 4 Interest has been shown in the 900 area for development of a transfer station

EIS CONCERN/COMMENTS (cont'd)

- 4 and office complex for C&S Sanitation. This site is near, or adjacent to, an industrial area which contains landfills and other waste sites. Analysis for this potential use should be included in the EIS as impact on cleanup as well as on surrounding areas must be addressed. See attached letter.
- Museum Development:
- 5 The Museum Committee has identified an area of the property it wishes to procure for museum and associated activities. Some of the property is to be used for purposes not identified in the EIS. See attached summary.
- Commercial Development:
- 6 The Industrial/Commercial Committee has proposed an alternate use of current residential property which was not addressed in the EIS. See attached summary.
- Education:
- 7 The Education Committee has proposed an alternate use plan for a Rantoul Technology Assessment Center which was not addressed in the EIS. See attached summary.

BASE REUTILIZATION PLANIntroduction

8 The Arts and Culture Committee and the Air Museum Committee, with sponsorship of Prairie Aviation Museum and the Chanute Heritage Foundation, propose to preserve the historical and cultural aspects of Chanute AFB through formulation of the Octave Chanute Museum and Conference Center as a viable alternative in the reuse of parts of Chanute AFB. The organization proposes to acquire some of the aircraft currently on static display on Chanute AFB and the Officer's Open Mess (Fanmarker Club) building and surrounding structures, as well as the WWII Barracks buildings and the old Chapel (The Steeple). Under this alternative proposal the current officer's temporary and visiting quarters would be converted into a hotel, temporary living facilities into display buildings and classrooms, the Thrift Shop and Supply Storage into storage, the five family living duplexes into an International Language Village and Aviation Camp, and the Fanmarker Club building into a display building and meeting facility for the Convention Center and restaurant for all visitors. The pool would be run by the Hotel complex. These proposals are in the planning phase and financing has not been finalized.

Concept:

I. The Octave Chanute Museum and Convention Center would be bounded by Aircraft Drive and Superfort on the North, connected by Falcon Drive and Mustang Street and a line extending to the south from Heritage to Liberator on the East, Liberator Drive on the South and the west fence line and Thunderbird Drive connected by Heritage Drive on the West.

BASE REUTILIZATION PLAN, ARTSCULTURE/AIR MUSEUM (cont'd)

II Facilities Required Include:

BUILDING NUMBER	BUILDING NAME	PROPOSED USE
589	Fanmarker Club	Restaurant/Convention Center
585	Visiting Officer's Quarters	Display
593	Temporary Living Facilities	Display
594	Temporary Living Facilities	Display and Language Village Classrooms
585	Recreation Check Out	Display
581	Visiting Officer's Quarters	Hotel
583	Visiting Officer's Quarters	Hotel
586	Bath House	Bath House
587	Swimming Pool	Swimming Pool
588	Bath House	Bath House
590	VIP Bachelor Officer's Quarters	Display
106	WWII Barracks	Display
110	WWII Barracks	Parts
523	Chapel	Chapel Display
567	Picnic Pavilion	Parking
506	Married Temporary Housing	International Language Village (ILV) and Space/Aviation Camp
504	Married Temporary Housing	ILV and Space/Aviation Camp
507	Married Temporary Housing	ILV and Space/Aviation Camp
508	Married Temporary Housing	ILV and Space/Aviation Camp
509	Married Temporary Housing	ILV and Space/Aviation Camp
579	Thrift Shop	Storage
580	Supply Storage	Storage

BASE REUTILIZATION PLAN, ARTSCULTURE/AIR MUSEUM (cont'd)

III. As listed in paragraph I, all buildings, grounds and supporting structures would be used to support the Aviation Museum which is the primary thrust of this proposal.

IV. No building currently exists in the Village of Rantoul to accommodate this proposal. The historical significance of Chanute AFB and its namesake must be preserved. This proposal accomplishes that objective in a self-supporting way.

V. As stated in the ERA study, the museum operation on its own would not be able to operate without significant contributions. The State of Illinois has been contacted for a grant on the Tourism side. The Chanute Heritage Foundation has agreed to sponsor the museum in its infancy. The Convention Center, the pool, and the International Language Village would contribute to the operation and defray the costs forecast in the ERA study. Further financial studies are currently underway.

VI. The museum foundation would oversee the management of the complex and will act as the board of governors concerning operations. Studies are still underway on the organizational chart.

Attachments: 1. International Language and Cultural Program
2. Air Museum Proposal

BASE REUTILIZATION PLAN

9 The Industrial/Commercial Committee propose the commercialization of property as a Williamsburg of the Midwest, as a viable alternative for the redevelopment of Chanute Air Force Base. This tourist attraction and business center, which when combined with adjacent parks and recreation areas, would present a bit of history in east central Illinois for the retail consumer. The facilities would be developed for uses such as: professional offices (law, medical, dental, investment-brokerage, real estate, insurance, etc.); or commercial activities including, art studios, restaurants, bed and breakfast, shops and boutiques, that would preserve the outside appearance of the buildings so that the historical atmosphere would prevail. The committee further proposes exterior renovations to include, old style lamp posts and cobblestone streets to more completely establish the desired atmosphere.

1. The following buildings are proposed for commercialization:

BUILDING(S)	PRESENT DESIGNATION	FUTURE DESIGNATION
5, 8, 9, 10, 11	Senior Officer Housing	Retail/Professional
70-74, and 86-90	Officer Housing	Retail
78, 79, 80, 81, 82	Senior Officer Housing	Retail
75, 84, 13, 15	Garages	Storage

2. The buildings would be used as listed in paragraph 1 for commercial/retail/professional development as a tourist/shopping district with potential development for this purpose through PUD-type sales.

BASE REUTILIZATION PLAN, INDUSTRIAL/COMMERCIAL (cont'd)

3. There is no other area in Rantoul to support this type of development. The nearness to the proposed airport facility makes this development opportunity essential to support traffic forecasts in conjunction with the airport. This proposal insures the areas are released for public purchase as a unit to effect the areas of the surrounding airport district.
4. Private sources will be sought to finance the "Williamsburg of the Midwest" airport shopping and professional district.
5. A private developer(s) would manage the area within the Village ordinances.
6. Financing of these proposed uses will be dependent on future financial assistance from commercial/retail developer(s) and grants from appropriate agencies.

BASE REUTILIZATION PLAN
RANTOUL TECHNOLOGY ASSESSMENT CENTER/VOCATIONAL ACADEMYIntroduction:

10 | The Education Committee proposes, as an alternative plan, the Rantoul 2.1 Technology Assessment Center. The proposed Center will be an institution which will be supported by the State Board of Education for the purpose of assessing the industrial skills of secondary students, as well as post secondary students who have completed vocational programs in either local districts at the secondary schools or through the Tech/Prep programs of the Illinois Community Colleges. The skills which will be assessed will be responsive to the goals of industry and manufacturing associations.

Concept:

Students will come to the Center for a comprehensive evaluation which will take about three to five days. During this time students will be housed in the former Air Force dormitories and will be evaluated in laboratories and classrooms of Smith Hall on the Chanute Air Force Base.

I. The following is an inventory of facilities needed:

BUILDING	PRESENT DESIGNATION	FUTURE DESIGNATION
68	Smith Hall	Assessment Lab. Administration Counseling Center
306	Dormitory	Sleeping Quarters Dining Facility
Parking Lot (2)	Parking Lot	Student Parking Employee Parking

2. The buildings and parking lot(s) listed in paragraph #1 will be used in the following way:

BASE REUTILIZATION PLAN, RANTOUL ASSESS. CENTER/VOC. ACADEMY

- a) Smith Hall and the classroom, office, and laboratory furnishings, as well as all land associated with the building to North, West, South, and one-half the distance between building 66 and 68 to the East of Smith Hall, will be used for classrooms and assessment laboratories, as well as offices for administration and counseling;
 - b) Dormitory building 306 and all the furniture for student rooms, offices, lounges, dining halls, and kitchen equipment, as well as the land, including the parking lot, defined as Marauder Street on the North, South along Thunderbolt Street to Flying Fort Street, West along Flying Fort Street to the East side of the parking lot, South along the East side of the existing parking lot to the South line of said parking lot and then West along the South side extended to Thunderbird Drive, North along Thunderbird Drive to a line extended from Marauder Street, will be used for sleeping quarters for students going through the program. The dining halls will be used for feeding of these same students;
 - c) The parking lot immediately across Destroyer Street from Smith Hall, and all associated with the parking lot to the North, East, West, and twenty feet South of the parking lot, and the parking lot described above (b) will be used to park cars of students, as well as employees.
3. Justification by building:
Building 68 is best suited for both the laboratory and classroom

BASE REUTILIZATION PLAN, RANTOUL ASSESS. CENTER/VOC. ACADEMY

experiences for the assessment center. Machinery may be used without disturbance from one room to another, etc.

Building 306 would have enough space to hold up to 1000 students and could accommodate the needs of this as program as well as the housing and food service needs of several other programs.

4. Funding Sources:

This program will be a state program which will operate the buildings. Additionally there will be industrial support for upkeep and new machinery. There would also be a self-supporting room and board charge.

5. Staffing:

The State will organize a staff for evaluation and counseling as well as food service and housekeeping contracts.

